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ORIGINAL LECTURES.

AN UNUSUAL CAUSE OF CHRONIC LEAD POISONING.

A Clinical Lecture Delivered at the Pennsylvania Hospital, October 24, 1885.

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(Reported by Charles Baum, M.D.)

GENTLEMEN: As a clinical lecturer, I shall teach you most by showing you ordinary cases of disease, such as you will be called upon to treat when you become practising physicians, but occasionally there are in the wards of the hospital cases of rare disease or unusual phases of common ones, by showing you which I may perhaps impart to you as valuable information. Some of you may perhaps never meet with a case such as I shall now describe, but if you should, the information I shall impart to you may prove of value.

A week ago to-day I found in our waiting-room a man who wished to be admitted to the ward. I can perhaps best explain to you the method by which I arrived at the diagnosis in his case by telling you the impression his condition produced upon me when I first saw him: He was seated upon a bench looking very pale, and with an expression of great pain upon his face, and when I asked him what was the matter, he said he had violent pain in the abdomen. I then asked to see his tongue, and when he protruded it I noticed that the breath had a heavy, disagreeable odor. Something in his appearance having now aroused my suspicions in the right direction, I questioned him in regard to the condition of his bowels, and upon learning that he had had no passage for five days and had been constipated for some time past, it was only necessary for me to ask him to set his teeth together so that I might examine his gums and teeth to establish at once the diagnosis. There was upon the gums of both the upper and lower jaws the characteristic blue discoloration of lead poisoning. This blue discoloration, you must remember, is upon the gums and not upon the teeth, and you must never allow yourselves to be deceived into mistaking the blue color which the tartar upon the teeth of those who are not cleanly about their mouths often has, for the blue line of lead-poisoning. If there is ever any doubt in regard to the situation of a blue discoloration in the mouth, it is always readily dispelled by taking a matchstick or toothpick and scraping at the spot to see upon which surface it is situated, whether upon the teeth or gums, and once you have established that the blue line is upon the edges of the gums just at their junction with the teeth, there can be no doubt as to the nature of the disease with which you are dealing. Having discovered this line upon the gums, I was certain, without further inquiry into either the condition or occupation of the patient, that he was suffering with lead colic, for

had he not its three most marked and constant symptoms—continued severe pain in the abdomen, obstinate constipation, and blue line upon the gums? I have already shown you this year a tinsmith who, I told you, I was satisfied was suffering with lead colic from the pain he had in the abdomen and constipation of the bowels, although there was no blue line upon the gums at all, and I was only enabled to make the diagnosis in his case from knowing that the nature of his occupation made him constantly handle lead, which you know is a large component part of solder.

Having so easily made the diagnosis, it next became a matter both of scientific interest and of importance to the patient that it should be discovered by what means the poison had been introduced into his system, for only by learning how he had been poisoned could he be warned against the danger in future. The man said he was a tailor, and had not done any other sort of work for a long time. This put me entirely at fault, especially when I found upon inquiry that nothing could be learned tending to show that his drinking-water was in any way contaminated, and as he strenuously denied using any leaden implements or handling the metal in any shape. Later I was told that Dr. H. C. Wood used to relate in his lectures at the University of Pennsylvania that he had attended sewing women suffering with lead poisoning contracted from biting thread which it was found was weighted with sugar of lead. Upon asking at a large tailor's establishment in the city, I was told that much of the silk used by them is treated with sugar of lead to give it the desired weight, and then Dr. Penrose, the resident physician, found in the *Half-Yearly Abstract*, for 1866, July to December, an article by M. Chevallier, giving an account of how thread was treated with lead, and of how women using it suffered from lead poisoning. I had intended to obtain some of the thread with which this man worked, and yesterday he was allowed to go out of the hospital to procure some of it for us, but he has not returned. I shall, therefore, be unable to do what would have been most satisfactory, examine the thread and demonstrate its containing lead. The cause of his attack of lead colic has been, however, sufficiently made clear to you from what I have told you; that the disease has been produced in the same way before from the use of thread which had been treated with sugar of lead.

The prognosis in this affection is almost always favorable, as I have already told you when I previously had occasion to show you cases of lead poisoning this autumn. Very few persons die of the effects of any of the forms of chronic lead poisoning directly, except from the encephalopathy.

With regard to treatment, the first indication to be met in a case of lead colic is to relieve the pain, which is often very severe, and this should be done before any effort is made to cure the constipation, which is also one of the most constant symptoms. To this end morphia should be given, and as much as from half a grain to

two grains will often be required in the course of three or four hours, before the pain is controlled. This patient took a quarter of a grain, and after about an hour a second quarter; at the end of another hour, the pain being still severe, he was given another half grain, and then two or three hours later the same dose was repeated. After taking this quantity—one and one-half grains—his pain was quieted, and for the first time in several days he slept comfortably. The pain having been by this means alleviated, he was given half an ounce of Epsom salts to relieve his constipation, but this amount had to be given a second or third time before the bowels moved. The two most urgent symptoms having now been disposed of, it next became proper to administer some drug which would aid nature in eliminating the poison from the system, and this is best effected by the use of iodide of potassium, which was accordingly given in ten grain doses three times daily. Under this treatment—morphia to relieve the pain, Epsom salts for the constipation, and iodide of potassium to eliminate the poison, the patient had sufficiently recovered at the end of seven days to leave the hospital, ostensibly for the purpose of procuring for us some of the thread with which he had worked, for examination, but actually, for some reason best known to himself, not to return again.

ORIGINAL ARTICLES.

LYMPHATIC LEUKÆMIA IN CHILDHOOD.¹

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THIS disease is interesting on account of its clinical rarity and the infrequency with which it is mentioned in current literature. There is a uniformity of composition of healthy blood which is curious. This is brought about by that equilibrium which is so striking in organs regulating the production of waste.

The blood corpuscles which we are called upon to study, are :

1st. The red, of which there are floating in the plasma about 5,000,000 to the cubic millimetre. These are about $\frac{3}{250}$ of an inch in diameter.

2d. The white, of a diameter of $\frac{1}{250}$ of an inch, having the proportion of 1 to every 300 or 500 red.

3d. The nucleated red, found in the fetus and infant, and disappearing about the third or fourth year of life. These may contain one or more nuclei in some instances protruding from the cell. They measure from $\frac{1}{400}$ to $\frac{1}{200}$ of an inch.

4th. The haemoblasts of Hayem—"small discoid, colorless corpuscles, normal constituents of healthy blood—in drawn blood, they aggregate in clumps known as Schultze's granule masses." As to the origin of red corpuscles, "they are developed from colorless corpuscles, the lymph cells, or leucocytes. The nucleated corpuscles of the embryo also aid in their development. These nucleated cells disappear early in childhood, and are then found only in the red marrow." It is Osler's opinion that "they appa-

rently originate from colorless marrow cells, which gradually become more homogeneous and haemoglobin develops in the protoplasm, the nucleus degenerates and disappears, when the cell has the appearance of an ordinary red disk." Possibly these nucleated cells may give birth to red cells by the process of budding. The relations of the cytogenetic organs to blood formation, have always been somewhat debatable ground; the present state of our knowledge may be formulated about as follows: "The spleen certainly takes part in the development of colorless corpuscles, but its participation in red blood formation seems doubtful, though the opinion prevails widely that the spleen is one of the important organs in the formation of red corpuscles. The evidence for this belief is of an exceedingly scanty nature.

"The lymphatic glands and adenoid tissues in other regions are the seat of constant production of colorless corpuscles, but of their relation to the red corpuscles there is the same lack of information as in the spleen."

Neumann and Bizzozero pointed out the fact that the red marrow appears to be the seat of blood formation. In the adult it is the only region in which embryonic or nucleated red cells are found. In the young, the marrow fills the long bones.

It is Osler's opinion, quoting from his recent admirable articles on this subject, that the evidence of the development of red corpuscles in the marrow rests upon the constant presence of nucleated cells infiltrated with haemoglobin, and of their fission. In excessive hemorrhage, natural or induced, it appears to undergo active proliferation, and it is an interesting fact to notice the marvellous rapidity with which the red corpuscles are reproduced after hemorrhage. The amount of haemoglobin in healthy blood, according to Pfreyer, is 13.45 grammes to 100. This relation is important for us to bear in mind, as it proves an index to treatment. The color test being used, I feel certain that before long it will be a matter of more than ordinary interest to the general practitioner when the means of applying the color test shall be generally adapted, as has been partly done already, to daily practice.

In the newborn, the blood is said to amount to one-tenth part by weight of the body. In the adult, one-twelfth to one-fourteenth. It may also be noted that it has been shown by Neumann that the liver in the embryo may be the seat of the formation of corpuscles, though in the adult it is the seat of their destruction.

Let us now take up the subject of anaemia in children. We will omit that caused by hemorrhage, by toxic agents, by mineral poisons, by miasm, by syphilis, in which we have an increase in the watery elements and a diminution in the albuminous, and consider that dependent upon disorder of the blood-making organs themselves, and here we meet with a most difficult problem. By the blood-making organs we understand the spleen, the lymphatic tissues, and the bone marrow, remembering, of course, that some of these tissues have also to do with blood destruction. We, however, definitely know that an increase in the cytogenetic tissues is associated with disturbances in blood formation. The organ undergoes a

¹ Read before the Obstetrical Society of Philadelphia, November 5, 1885.

hyperplasia, particularly of its fibrous constituent, and the marrow of bone changes from normal appearance to one like spleen pulp. The blood of all patients suffering from anæmia presents a reduction in the number of red corpuscles. This is true, no matter whether the seat of the trouble is located in the spleen, the marrow of bones, or in the general lymph glands; the white cells may or may not be increased. The clinical features of a case of anæmia will be strikingly alike, let the cause be in any one of the blood-making organs; all the more important symptoms will be present. To quote once more, such common features would be "the progressive anæmia with its group of circulatory symptoms, the irregular febrile reaction, essential fever of anæmia, the absence of marked emaciation, the tendency to effusions of serum, the progressive debility, the recurrence of hemorrhages gastric and intestinal, gastric and intestinal disturbances, and the resistance to treatment."

These affections that have so many symptoms in common, are grouped as distinct diseases under the following headings, viz., Leukæmia, Hodgkin's disease (anæmia lymphatica), splenic anæmia, and idiopathic anæmia.

Leukæmia signifies a hyperplasia of the blood-making organs with anæmia and an increase in the colorless corpuscles. Of this form we have three varieties: the splenic, lymphatic, and medullary. Leukæmia is present at all ages; the youngest case recorded by Osler being an infant of eight months. The chief symptoms are, insidious onset, anæmic appearance, bleeding at the nose or other hemorrhages, frequent diarrhoea or other gastro-intestinal disturbance. The spleen is enlarged, gradually increasing in size from the onset, and finally it may interfere with the circulation, and cause difficulty of breathing by pressure. Late in the disease the liver is also enlarged. The lymph glands in most cases are affected, and sometimes slightly enlarged. The tonsils and follicles of the pharynx, are usually enlarged. The lymph glands of the intestines, and of the peritoneum, are always enlarged. Fever is present, and increases as the case progresses, and is usually of the remittent type. But the most important aid to differential diagnosis, is the microscopical examination of the blood. This I give in detail in the case that forms the basis of this paper.

I was called in consultation by Dr. J. W. Gadd, of this city, to see the child with him, in the latter part of last month, and the following notes by Dr. Gadd, have been given me:

Mamie McC., aged four years and five months, had measles when about two years old, and from which she recovered without complication or sequelæ. About August, 1884, the tissue surrounding the eye became much inflamed and swollen. The swelling increased so much that the eyelid could not be opened for several days. After continued poulticing an abscess formed and broke, discharging a quantity of pus, and continued to do so for a considerable time, but finally healed up with a small scar. The child never complained, yet was pale, and did not want to play as other children did. I

believe this was due more to her disposition, than to the effect of any disease.

About midsummer there appeared a rash all over her body, very thick, and resembling the eruption of measles; as it matured, it was crowned by small white caps or heads. The epidermis soon came off in large patches. The child had no fever. As the eruption faded the mother observed purplish spots, like bruises, making their appearance. These were considered by the parents to be bruises due to falls. No attention was paid to her condition until September 28th, when I was called in the evening to arrest an epistaxis which had existed most of the day. I found the child lying on a sofa, though able to sit up, with blood slowly trickling from the nose; each nostril contained a large clot. The child appeared very anæmic with slight fever, yet did not complain of anything except weakness. The mother stated that the appetite had been very poor for some time past. The bleeding from the nose was very easily arrested by removing the clots, and packing each nostril with a strip of lint. I also gave the following internally:

R.—	Acid. gallic.	gr. xxx.
	Acid. sulph. dil.	m. xl.
	Ext. ergot. fl.	m. xxx.
	Syrupi	f $\frac{3}{4}$ j.
	Aqua	q. s. ad f $\frac{3}{4}$ j.—M.

Sig. Teaspoonful in water every hour. Also ordering her as much milk as she cared to take, with the precaution that she should sip it slowly.

Tuesday morning I saw her, and found her in the same condition, except that the epistaxis had been arrested. I thought it best not to remove the lint packing. It now being daylight, her mother called my attention to the bruise-like spots over her body. These were in size from that of a two-cent piece, to that of a fifty-cent piece, and two of them, situated one over each trochanter, were as large as silver dollars; with the exception of these two, they were all, I believe, situated over the soft parts, such as over the belly of a muscle, and varying in color according to age from a bluish-black to a greenish-yellow. She still had some fever, and her heart was more rapid in its action than normal; hence I gave her, in addition to the gallic acid and ergot mixture, the following:

R.—	Liq. potass. cit.	f $\frac{3}{4}$ j.
	Spts. ath. nit.	f $\frac{3}{4}$ j.
	Tr. aconitæ rad.	gtt. xv.
	Syr. limonis	f $\frac{3}{4}$ v.
	Aqua	q. s. ad f $\frac{3}{4}$ j.—M.

Sig. Teaspoonful every two hours.

Wednesday morning I found her somewhat better, though still having slight fever; pulse 124 per minute, and moderately weak in character. I did not detect any abnormal heart sounds. I removed the lint packing without further bleeding, and with much relief to the patient. I then ordered tincture of digitalis in three drop doses, every three hours, and also the following:

R.—	Quin. sulph.	gr. viii.
	Tr. ferri citro-chlorid.	f $\frac{3}{4}$ j.
	Syr. tolu	f $\frac{3}{4}$ j.
	Aqua	f $\frac{3}{4}$ vij.—M.

Sig. Teaspoonful every three hours.

Thursday I found the patient, to use her own language, well; evidently much better. Fever had entirely subsided, the heart's action remained abnormally rapid. The cervical glands were slightly enlarged, but no enlargement of the tonsils and apparently no inflammation of the fauces. Treatment was continued with the addition of more nourishing food, beef-tea, wine-whey, etc.

The child seemed so much better that I said it might come to my office the next morning instead of my going there. Later, in the same evening, she took a sudden change for the worse but I was not sent for until Friday morning. Now the patient was suffering from high fever, 104° F. in the axilla; pulse 134 per minute, compressible. The cervical glands much enlarged and very hard; the bowels had not been moved for twenty-four hours; the tonsils were but very slightly swollen; there were no patches in the throat. Thinking that possibly she was developing a malignant form of diphtheria, I at once put her on the calomel treatment until the bowels were moved, giving her three grains, repeated in two hours; and then two grains; the bowels were moved freely, and the calomel was stopped. I also gave suppositories of two and a half grains of quinine every two hours; also,

R.—Liq. ammon. acet. f3j.
Spts. æth. nit. f3ij.
Syrupi f3iv.
Aqua f3ij.—M.
Sig. Teaspoonful every two hours.

I continued the tincture of digitalis in five drop doses every three hours. I also applied hot flaxseed poultices to the enlarged glands, and at noon plenty of beef-tea and milk, but the child did not care for food and it was difficult to get her to take any nourishment. At midday I noticed for the first time, although I had carefully and frequently listened before, a systolic heart murmur. The temperature was but little affected during the night, and next morning (Saturday) at 7.30 A.M. I found it as high as ever, 104° F. in the axilla. Fearing that endocarditis had set in from the continuance of high fever and the heart murmur, I at once applied a mustard plaster to the pericardium, followed by a poultice, giving internally potassium iodide and ammonium carbonate, continuing the digitalis until noon, when I met Dr. J. M. Keating in consultation.

Physical signs showed, in addition to what has been mentioned, an enlargement of the spleen, yet there was no history of malaria. Dr. Keating did not think that endocarditis had set in, believing the murmur to be rather of a haemical character, yet, as a stimulant to the heart, suggested the application of a blister; internally, very small doses of Basham's mixture every three hours, with the free use of alcohol, beef juice in small amount, etc. The temperature to be kept down to 102°, or lower, by means of the wet sheet. On examining a specimen of the urine which had just been passed, and the first that I had been able to obtain, I found it to be of sp. gr. 1016, of a light straw color, free from albumen and sugar. The child could not retain either medicine or beef juice. The nose again commenced to bleed,

to prevent which I again plugged the nostrils. Soon large clots of coagulated milk were vomited, the result of having been given by half-cupfuls at a time, which was entirely contrary to my direction. Her stomach soon became settled, and she took brandy and crushed ice in small quantities. We wrapped her up in a wet sheet once, then poured cold water over her until the temperature came down to 101° in the axilla, which required about 35 minutes, she was then wrapped in a blanket. In two hours the temperature was again 104°. We again gave several of the wet packs during the afternoon and evening, and notwithstanding we were at the same time giving two and a half grains of quinine every hour by suppository, the same rise in temperature was observed after each. During the night she took her medicine regularly; alcohol and water and beef tea were also administered.

Sunday morning (the day of her death) I found her, to all appearance, bloodless; pulse rapid and small; respiration shallow and too frequent; temperature rising to 104° after the wet pack, as before. During Saturday night she had removed the packing from the nostrils, which allowed a slight oozing of blood, and, this having been swallowed, gave rise to vomiting of clotted blood; this continued, after the bleeding from the nose had been again checked, at intervals of ten to fifteen minutes, which gave rise to the belief that there was a slight hemorrhage into the stomach; these clots differing somewhat in form and color from those which I ascribed to the epistaxis. The heart became more rapid—138 per minute—and the patient gradually sank. She died at 6.30 P.M. in great agony, giving two or three shrieks, which were quite loud, considering her weakened condition.

Dr. William Osler kindly examined for me a slide of blood, and reported as follows:

"Red corpuscles present no special alteration in size or shape. Colorless corpuscles greatly increased in number—fifty or sixty in each field of the No. 7 Hartneck. They present remarkable variations in size; many are small, not more than one-third the size of the longer forms; they resemble the smaller colorless cells which Virchow has noted to be present in cases of lymphatic leukæmia. Many of the cells have feeble, amoeboid movements. Nucleated red corpuscles not observed. Schultze's granule masses (often abundant in leukæmia) scanty."

The relation of the increase in number of the colorless corpuscles above noted to the increase in size of the glands and cytogenetic tissue is, indeed, hard to solve. The increase in size and hyperplasia of the spleen in leukæmia and anæmia are histologically identical. We must remember that the view that colorless corpuscles change into red corpuscles is not fully established; hence, also, that it is not proven that the excess of colorless corpuscles is due to failure in the change to red ones. In such cases the prognosis, when the disease is detected at its incipiency, may be favorable under rigid treatment of fresh air and suitable diet, iron, quinine, and arsenic and salt bathing; but in marked cases that have existed for some time with advanced symptoms the result is fatal.

SUPPOSED FRACTURE OF
THE CORACOID PROCESS OF SCAPULA.¹

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MOST observers, not familiar with the anatomy of the soft parts, would, on looking over the angles and projections of the skeleton, undoubtedly select the two hook-like processes of the scapula as especially exposed to fracture. Did you press them further and let them select the more frangible of the two, the coracoid process would probably be chosen because of its independent projection, and because of a quasi-constriction immediately posterior to the elevated ridge which gives attachment to the trapezoid ligament, while the acromion, bolstered as it is, by its junction with the clavicle, would indicate a strength which experience shows is fallacious. Should an anatomist, pure and simple, next have to decide the question, basing his conclusions merely on what he has found on dissection, and unbiased by any surgical facts, I doubt whether he would place the coracoid fractures in so improbable, and, as some have it, impossible light as surgical writers of the present day.

"Fractures of the coracoid process are remarkably rare. I have seen but one decided instance," says Mr. Thos. Bryant.²

"This fracture is exceedingly rare."³

"The coracoid process is but seldom broken, there not being more than ten or twelve unequivocal cases of this accident recorded."⁴

"The coracoid process," says Mr. Lizars, is said to be broken off, but this I question very much."⁵

"The acromion and the coracoid processes⁶ are occasionally broken off, the latter very rarely."

Druitt, Gant, Holmes, and others bear the same testimony. What is the secret of its immunity?

The deltoid muscle acts as a buffer to outside violence. The clavicular portion of the pectoralis major covers the front. The clavicle arches over a portion of it as a protecting roof, and often sacrifices itself to shield the coracoid.

Again, its curved contour fits to a certain extent the convex head of the humerus, from which it is separated by an elastic bursa and ligaments. It is further braced by the coraco-clavicular, coraco-acromial, and coraco-humeral ligaments, the short head of the biceps, coraco-brachialis, and pectoralis minor muscles. But before all these protective agencies, the mobility of the scapula itself may rank with its power of falling back on the muscular cushions which surround it when hard pressed by external violence.

Whatever be the cause or causes of infrequency, the fact remains that the coracoid process is but seldom broken, and that mostly by some serious injury, which has imperilled parts much more important.

As will be seen by the accompanying table, where the complication or concomitant injuries are men-

tioned, we find dislocation and fracture of humerus, dislocation of outer end of clavicle, fracture of base of skull, glenoid cavity, etc., all marking the injury as a very grave one, and the force used as excessive. There is but one case from muscular action alone, No. 18. Falls appear to be the most common immediate cause, while, of course, the coracoid is not exempt from the constitutional bone frailties that occur in syphilis, pregnancy, rheumatism, etc. Sex or age does not affect materially, since our list gives instances from childhood to threescore years and ten. Allen (*Human Anat.*, Sec. ii. p. 171) says: "The coracoid process acts as a check to the inward movements of the head of the humerus, and unless the process be broken, subclavicular dislocation can scarcely occur." He further adds, in regard to its development: "This process is homologous with the coracoid bone of batrachian reptiles and birds. As seen in these animals, the coracoid bone extends between the sternum and scapula very much after the manner of the clavicle in the human subject."

The diagnosis of this fracture is not so simple as a casual observer might suppose, for on looking at the table we find that most of the cases have been discovered by post-mortem examination. The severity of the accompanying injury, the fact that but little displacement occurs from the action of the pectoralis minor and short head of biceps, unless the rare rupture of the coraco-clavicular ligament also happens, and the ready way in which injuries about the shoulder-joint swell, all mask the separation of the coracoid until the scalpel of the pathologist discloses it. Crepitus, pain, and mobility are more to be depended on in life, especially if all the other bony parts of the shoulder yield negative results on examination.

In regard to treatment, there is not much to be said. This silence, however, is not due to the results of treatment being ineffectual, a condition of affairs that brings out either a host of specifics in the hands of charlatans, or a few suggestions from the pens of real thinkers, but because the application of one or two anatomical facts, together with the requisite amount of common-sense, will effect many cures.

Place the divided bones in position, and keep them there if possible. This is best done by relaxing the biceps and coraco-brachialis muscles, by semiflexing the forearm, and relieving the tension on the pectoralis minor, by laying the forearm across the chest. The ligaments, if not ruptured, will be serviceable splints. A Velpau bandage will maintain the parts at rest.

The following case is reported because it is believed to be a fracture of the coracoid process—a diagnosis made after careful examination, but not stated positively because of the rarity of the lesion, together with the fortunate recovery of the patient.

Mr. K., at 76 years, fell, striking his right shoulder against a projecting board. When first seen by me, through the kindness of my friend, Prof. Miltenberger, I found evidence of shock, the right arm was powerless, the shoulder somewhat swollen, and a contusion one and a half inches below the acromion, and slightly to the posterior side of the humerus. Movement was very painful, and occa-

¹ Read before the Clinical Society of Baltimore.

² Practice of Surgery, fourth edition, p. 872.

³ Agnew's Surgery, vol. i. p. 876.

⁴ Erichsen's Science and Art of Surgery, vol. i. p. 410.

⁵ Hamilton on Fractures, seventh edition, p. 247.

⁶ Clark's Manual of the Practice of Surgery.

Table of Cases.

No.	Age.	Sex.	Cause.	Reporter.	Reference.	Complications.	Evidence.	Remarks.
1	15 yrs.	Female.	.....	Bryant,	Surgery 4th edit., p. 872.	.....	Crepitus and displacement.	
2	14 "	"	Fall.	Paule,	" " "	.....	Mobility and crepitus.	
3	Adult.	...A.	.....	Agnew, (Neal)	Surgery, vol. i. p. 876.	.....	Post-mortem.	Epiphyseal? Ligamentous union.
4	"	—	.....	Agnew, (Gibson)	" " "	.....	" "
5	...	.....	.....	Hamilton, (Mussy)	On Fractures, p. 247.	Dislocation of humerus.	" "	
6	...	.....	.....	Hamilton, (Jackson)	" " "	Glenoid involved.	" "	Broken twice.
7	...	.....	.....	Bransby Cooper,	Edit. of Sir Astley Cooper on Fract. and Dislocat'n Amer. edition, p. 380.	Fract. acromion and humerus.	" "	
8	...	.....	.....	Arnott,	Fergusson's Surg., p. 231.	.....	" "
9	...	.....	.....	South,	Lond. Med. and Chir. Rev., 1840, vol. xxxi., new series, p. 42.	Disloc. humerus, fract. clavicle, acromion, and olecranon.	" "	
10	...	.....	.....	Holmes,	Med. and Chir. Trans., vol. xli. p. 447.	.....	
11	...	.....	.....	Duverney,	Malgaigne, Traité des Fract. et des Luxat., t. i. p. 512. Paris edit.	.....	Post-mortem.	
12	...	.....	.....	Boyer,	" " "	.....	
13	...	.....	.....	Malgaigne,	" " "	.....	Post-mortem.	
14	...	.....	.....	"	" " "	.....	" "
15	Adult.	Male.	Struck by edge of board.	Hamilton,	Loc. cit., p. 248.	Dislocation out. end of clavicle.	Preternatural mobility.	3 mos. old when discovered.
16	Child.	Female.	Fall on shoulder.	"	" p. 249.	" "	Mobility and crepitus.	
17	38 yrs.	Male.	Struck by iron rod on shoulder.	"	" "	Paralysis of arm, forearm, and hand.	Crepitus and displacement.	
18	...	.....	Muscular action.	Hulme,	Lancet, vol. ii. p. 737, 1873.	.....	
19	...	.....	Injury to shoulder.	Agnew,	Surgery, vol. i. p. 876.	Dislocation of humerus.	Prominence of process.	Noticed one year after injury.
20	...	.....	Fall.	Flower,	Holmes's Surg. (Packard), vol. i. p. 851.	.....	Mobility of process and crepitus.	Indirect force.
21	...	.....	"	"	" " "	.....
22	...	.....	.....	Erichsen,	Science and Art of Surg., Amer. edit., 1818, vol. i. p. 410.	Fract. of glenoid cavity and base of acromion.	Post-mortem.	
23	35 yrs.	Male.	Fall.	Bennett,	Dublin Journ. Med. Sci., 1873, lvi. pp. 345-349.	Fract. of base of skull, disloc. of humerus.	" "	
24	32 "	Female.	"	Case,	Lancet, Lond., 1840-1, ii. p. 350.	Lacer. wound of forehead and cheek.	Crepitation.	
25	27 "	Male.	"	Huse, E. C.	Chicago Med. Journ. and Examiner, 1879, xxxix. p. 175.	.....	Crepitus.	Not confirmed by autopsy.
26	76 "	"	"	Smith, Alan P.	Personal communication.	.....	Crepitus, pain, soundness of other bones about the shoulder.	Bony union.
27	30 "	"	"	Johnson, R. W.	.....	Shock.	Crepitus, displacement, mobility of process.	Bony union.

sional crepitus could be clearly felt when the arm was rotated. The head of the humerus was thrown a little forward and inward, but readily answered to all movements imparted at the elbow. Suspecting a fracture of the clavicle, and knowing the slight displacement occurring when the line of separation lies between the coracoid and trapezoid ligaments, I made a most careful examination of that bone, but found absolutely no crepitus nor any pain on pressure throughout its entire length. The acromion was intact, there was no break about the glenoid cavity. The head of the humerus responded to all movements of the shaft, and yet there was unmistakable bone crepitus; this, too, directly over the coracoid process, where the pain was most intense. One point I regret I omitted on account of the suffering that pressure over this process caused, and that was to examine as to the mobility of the coracoid. Had I done that and found it movable, the title of this paper would have been more definite.

A Velpeau bandage continued six weeks, followed by massage and the faradic current, were the means of restoring his arm to its former integrity. The coracoid process is now immovably fixed to the scapula.

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SOME USES OF COCAINE IN GYNECOLOGY.¹

BY CHARLES HERMON THOMAS, M.D.,
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SELDOM does a new drug reach so sure a place in the confidence of the medical profession as that accorded to cocaine. I very early began its employment in ophthalmic practice, and soon extended its use to a variety of gynecological applications. The results obtained have been so satisfactory that I now never go to such a case without cocaine in my bag or pocket. After considerable experience in its use, I am convinced that it is quite as valuable in the latter case as in the conditions for which it was originally recommended. That it is a local anæsthetic when applied to mucous surfaces especially, is a familiar fact; but its property of reducing inflammation and engorgement of the same class of tissues is not so generally recognized, notwithstanding that it is a point of considerable practical importance. This action of the drug is readily verified by observing the marked paleness and shrinkage which follow in a few moments after its application to surfaces thus affected. While this condensation of tissue is to a considerable degree temporary, it seems to be of longer duration than the accompanying anæsthesia. In some cases the good results obtained by reducing hyperæmia in this manner, appear to be permanent. The common fear that it will fail to prevent pain may usually be overcome by placing a few drops of the solution on the tip of the patient's tongue, when the numbness produced seldom fails to induce full confidence in its efficacy. Cocaine hydrochlorate is the salt upon which my experience is based.² A four

per cent. solution (gr. iijss to fʒj) in water acts well for most purposes, though a somewhat weaker or stronger one may sometimes be substituted with advantage. The addition of boracic acid in the proportion of gr. ij to the fʒj insures sterility of the solution.

When used, it should be applied with thoroughness, the parts being first freed from mucus, and some minutes allowed to elapse for its effects to develop; the time should be not less than two minutes, and in cases where considerable pain is to be anticipated, a strong solution, ten per cent. or more, may be employed, and the application repeated after an interval of two minutes, and in five minutes from the beginning the full effects of the drug may be looked for. That the anæsthesia produced by cocaine is complete, I have personally experienced, having made use of a four per cent. solution by injection into the nostrils previous to an application of the galvanic cautery to the nasal cavity. The cautery had been applied on a previous occasion without cocaine, and the pain was severe. With it, not the slightest pain was felt once, and I was conscious of the action of the cautery only by the hissing sound produced.

I have found it particularly valuable in certain cases of cervical endometritis in which, though there may be no erosion externally, and but little characteristic discharge, there is a state of extreme sensitiveness existing about the region of the internal os uteri, a probe or cotton easily bringing blood, and any application made to the part is liable to produce bleeding and severe radiating and ovarian pain. Cocaine carefully applied with the syringe or cotton-carrier, prevents the pain and bleeding, which would otherwise follow the necessary medicinal application. The swelling is thus also materially reduced, and the congestive or inflammatory stenosis which usually exists, is consequently for the time relieved, and applications to the part itself as well as to the entire endometrium, are greatly facilitated.

In urethral caruncle sensibility may be so destroyed, that the painful excrescences may be clipped off, and the site painlessly cauterized. Cocaine is also extremely useful in painful irritation and inflammation of the female urethral tract, and especially of the part just within the meatus; a condition attended with distress frequently referred to the bladder. Appropriate medication is painlessly made after its application, which may be conveniently made by means of the glass medicine dropper. As a means of preparation for the operation of stretching either the urethra or the cervix uteri, it is of unquestionable value.

To precede the application of caustic to chancres, it is also effective. I am informed by my friend Dr. Lewis, who uses it extensively, and with great satisfaction, that in plastic operations upon the vagina where considerable surfaces are to be flayed, the cocaine anæsthesia is insufficient to prevent pain. It has been recommended in dysmenorrhœa, and there is good reason to believe from several reports which have been made, that it is capable of producing excellent results when applied to the os uteri, and to the cervical cavity, by means of a small cotton tampon. I tested it recently in a case of uterine colic, using it

¹ Read before the Obstetrical Society of Philadelphia, November 5, 1885.

² The price has recently been reduced to ten cents a grain or less.

hypodermically, in two doses of one grain each, about half an hour apart, but without appreciable relief.

It has been tried internally, in doses of one grain or more in the vomiting of pregnancy, and has met with some favor, but in the only case within my own knowledge, it entirely failed.

In a case of painful vaginismus brought me by a practitioner from a neighboring city, the condition was quickly relieved by the local application of cocaine, and a complete examination was easily made, where, without its use, general anaesthesia would have been necessary. In a case of hyperesthesia of the vagina with mild vaginismus, in which frequent local treatment was required, a suppository containing one grain of cocaine, introduced into the vagina a half hour before each treatment, entirely abolished the spasm, and rendered the introduction of the speculum easy and comparatively painless. Cocaine suppositories also produced excellent results in a case of rectal tenesmus, after opium had proved inefficient.

Cocaine has been recommended in operations for lacerated cervix, and for the crushing of stone in the bladder. I have not made use of it in either of these applications, but strongly believe in its value.

In one hyperesthetic patient, in whom violent pain was developed on slight provocation, and who required local treatment of the cervix uteri and urethra, but who suffered so much from ordinary applications, that the local benefit was fully counterbalanced by the harm done nervously, it became necessary, on this account, to suspend treatment. After cessation for six months, treatment was resumed under cocaine, and it has since been in every way satisfactory, the pain formerly produced by applications to the cervix now being entirely absent. In the same patient painful irritability, with spasm of the bladder simulating cystitis, which was not entirely relieved by the opium suppository and other measures, yielded completely, and thus far permanently to a single injection of one grain of cocaine thrown into the bladder. The resumption of treatment in this instance was largely due to the enthusiastic approval of the husband, who had himself experienced complete relief from the injection of a drachm of the two per cent. solution into the deep urethra, for a violent urethrusmus. In another instance, in a woman with irritable pile, red as a ripe strawberry, and who was suffering extreme discomfort, the pile shrank and turned pale under the cocaine application, and was then painted with tincture of iodine, with entire absence of pain.

MEDICAL PROGRESS.

TOXIC EFFECTS AFTER THE LOCAL USE OF COCAINE.—Experience in the use of cocaine as a local anaesthetic is beginning to prove the necessity of some degree of caution as to the quantity used, as several cases in which symptoms of cocaine poisoning have occurred have been up to the present time reported by various observers widely separated from one another. KNAPP described headache, vertigo, nausea, tottering gait, pallor

of the skin, and cold sweat as the result of daily hypodermic injections of thirty-five drops of a four per cent. solution, with instillation of a few drops of the same solution in the conjunctival sac. G. MAYERHAUSEN, of Freiburg, after applying fifteen drops in two drop doses, at intervals of from five to eight minutes, to the eye of a little girl of twelve in whom the lachrymal secretion was so copious that he felt sure that half the application was lost, or that the total quantity of cocaine which was capable of producing any effect was probably not more than 0.005 grammes, found headache occur immediately after the operation, which was followed by irritation in throat and great nausea, with some temporary paralysis of the tongue, from which unpleasant effects she did not recover for twenty-four hours. PECK, on using cocaine on a lady on whom he performed tenotomy, observed a marked paleness come over her face.

REICH recently reported two cases in the *Russkaya Meditsina* in which similar toxic symptoms occurred, the one being a girl of ten years of age, the other a woman of sixty. In both cases a two per cent. solution was employed, and the quantity used did not in either exceed fifteen drops. STEVENS mentions a case in which faintness and cold perspiration were observed, but which he thinks were perhaps due to nervousness, as on a subsequent occasion this patient suffered no ill-effects from cocaine. He had, however, another case where seven or eight minimis of a four per cent. solution produced spasm and loss of consciousness in a healthy male subject.

Quite recently an account has been published by Dr. BELLYARMINOFF, of St. Petersburg, of five cases in which the use of a four per cent. solution in various eye operations was followed by headache, vertigo, nausea, vomiting, delay in the healing of the corneal wound, and in some instances by traumatic keratitis. All the patients were elderly females, in a more or less emaciated condition. It was found that ice and morphia were ineffectual in arresting vomiting, and that the best treatment was wine. In some of the patients a subsequent operation was well borne by using a two per cent. solution and limiting the number of drops instilled. Dr. BELLYARMINOFF remarks that when cocaine is badly borne the patient is generally a female, and aged, or badly nourished. He thinks it safer to use a two per cent. than a four per cent. solution. Finally, it must be added that cocaine has been charged by KEYSER, of Philadelphia, with causing a tendency to panophthalmitis after cataract operations, he having found this serious complication occur in three cases out of seven in which he used the drug.—*The Lancet*, November 7, 1885.

THE REGENERATION OF BONE SUBSEQUENT TO TREPHINATION.—V. MARTIN, after a study of the results of others and by his own experimental investigation, reaches the following conclusions relative to the regeneration of bone subsequent to the operation of trephining:

1. In young animals the newly formed osseous tissue takes its origin both from the medullary cavity limited by the circumference of the trephined bone, under the form of osseous centripetal tracts, and from the external surface of the dura mater under the form of osseous nuclei, which tend to unite with the former.

In old animals, a thinning of the bony margin occurs, from loss of substance, which is found full of dense and fibrous tissue.

2. The pericranium does not contribute, or only to an extent not appreciable, to the reparation of the bone.

3. The vitality and the consequent complete adhesion of osseous disks introduced and placed in position, is assured at all times when suppuration does not ensue, and this when moderate may not prevent a partial growth, of greater or less extent.—*Rivista Internazionale di Medicina e Chirurgia*, October, 1885.

DECOCITION OF LEMON IN THE TREATMENT OF GONORRHOEA.—MANNINO, in the *Annales de Syphiligraphie*, recommends the decoction of lemon in the treatment of gonorrhœa, holding it to be the best parasiticide of the gonococcus. His observations are conclusive, though not numerous. The remedy may be applied during the acute stage and but a very few days elapse until the condition begins to improve.

The decoction should be prepared with three good lemons, neither too green, nor over-ripe, cut in small pieces and put in about ten ounces of water, contained in an earthen vessel. Gentle heat should be applied until one-third of the quantity remains, the solid portion rejected, and the remainder used for injection.

The number of injections should be from three to four daily and only a fresh preparation used, a new decoction being made every two days.—*Revue Médicale*, October 24, 1885.

CASE OF ULCERATIVE ENDOCARDITIS WITH EMBOLISM IN THE MOTOR PORTION OF THE LEFT INTERNAL CAPSULE.—E. PERZICCHETTI (*Gazzetta degli Ospitali*, No. 51, 1885) records the case of a patient who for twenty years had been a sufferer from intermittent fever. Becoming suddenly ill with fever and chill, for two days he was unable to work. Shortly afterward he was again attacked with fever, and going to a hospital, he was placed under treatment for malaria. The spleen was much enlarged, owing to the duration of the disease, and in a few days, his condition in the meanwhile failing to improve, complete motor and sensory paralysis of the right arm and leg supervened. The heart was found hypertrophied and an aortic diastolic murmur easily recognized, from all of which diagnosis of ulcerative endocarditis with cerebral embolism was made.

Death occurred in a few days, and post-mortem examination made by Prof. Marchiafava, revealed the presence of a focus of softening, the size of a bean in the posterior portion of the left internal capsule and the neighboring portion of the optic thalamus. The arteries of the brain were normal and permeable.

The left leaflet of the aortic valves was found covered with soft granulations and fibrinous clots, and the spleen and right kidney contained hemorrhagic infarcts.

Dr. Perzicchetti considers it remarkable that the embolism did not occur in the arteria fossæ Sylvii, or in the arteria lenticulo-optica.—*Centralblatt für klin. Medicine*, October 24, 1885.

PERIOSTEUM GRAFTING.—DR. C. M. TRUEHEART reports a case of reproduction of two and three-fourths

inches of the clavicle in the human subject, by grafting with periosteum and with thin laminæ of bone, covered by its periosteum taken from a dog. The patient on whom the grafting was performed was a young man aged twenty-two, who had had about three and a half inches of the central portion of the clavicle shot away, together with an extensive mass of the adjacent soft tissues.

Measures taken to secure early union were ineffectual, and when, after six or seven weeks, examination revealed no prospect of union, either osseous or ligamentous, it was decided to resort to periosteal grafting. As a preliminary step, all new tissue in the tract of the injury was removed by the scissors and fuming nitric acid, and an excavation thus made three-fourths of an inch deep, about an inch wide, and two and three-fourths inches between the nearest projection of the end of the fractured bone.

The fragments of the clavicle were maintained in position by the axillary pad, etc., and healthy granulation having been obtained, small pieces of periosteum, the size of a large flaxseed, were placed upon the ends of the bones and into the wound, which was shortly covered with perforated oil-silk, covered with a compress of picked lint, moistened in a two per cent. carbolic solution. On the fifth day, seven or eight of the grafts were found to be taking.

In the course of a month three successive graftings were made, cicatization of the edges of the wound being in the meanwhile retarded by cauterization.

Two months after the grafting the entire gap, which had existed in the clavicle, was filled up with a tissue possessing the characteristics of bone as to hardness, inflexibility, and perfect performance of function of giving support to the heretofore dropping shoulder, there being no appreciable difference in the length of the two clavicles.

At the present time the bone remains the same, with the exception of some contraction in its transverse diameter, and an irregularity caused by the angular union of a fracture, the result of a severe fall occurring some months ago.—*The Medical Record*, Oct. 3, 1885.

TRICHLORACETIC ACID: A NEW DISINFECTANT.—FILIPPOREITCH, of Odessa, adds another to the long list of antiseptics. The substance is known as trichloracetic acid, and, according to its introducer, is an active antiseptic, even in a two per cent. solution. In a strength of from one to two per cent, it destroys all organic life; in weaker solutions of from one to one-half per cent., it does not hinder the development of ferment, or of mould, but arrests that of bacteria—micrococci. According to Filipporeitch, the rank of trichloracetic acid among the disinfectants is the third place, corrosive sublimate and carbolic acid alone being superior to it, while chloride of zinc, boracic acid, and potassium permanganate are inferior to it.

Trichloracetic acid is a crystalline substance, easily soluble in water or alcohol, of pleasant odor, and coagulates albumen freely.

In concentrated solution it is caustic. Diluted it provokes hypersecretion of the saliva, and destroys completely its power as a salivary ferment.

As a therapeutic agent, it is an excellent remedy in

erysipelas, in cutaneous excoriations which appear as a result of œdema in the lower extremities, in renal and cardiac disease, and in syphilitic ulcers, for the treatment of which it is not inferior to iodoform.

As a lotion, it is useful also in muguet.—*Gazzetta degli Ospitali*, October 25, 1885.

THE OCCURRENCE OF ABNORMAL QUANTITIES OF FREE HYDROCHLORIC ACID IN GASTRIC CRISES OF A TABETIC, WITH REFERENCE TO THE QUESTION OF NERVOUS INFLUENCE UPON THE SECRETION OF THE GASTRIC JUICE.—SAHLI (*Correspondensblatt für Schweizerische Aerzte*, 1885) records some interesting observations on the case of a tabetic, which make it probable that the secretion of the physiological gastric juice, similar to the cardialgic pains occurring as a result of pathological changes in the spinal cord, are directly due to spinal influences, and are not of reflex peripheral origin.

He found in the vomit of a tabetic with severe gastric crises, a quantity of hydrochloric acid much above normal, and the same condition persisted even if the patient remained twelve hours entirely without food. The gastric crises then became so severe that almost constant vomiting existed, and examination showed the matter vomited to consist of pure gastric juice with a slight admixture of salivary secretion.

The stomach, under ordinary conditions, produces no acid except during digestion, and the phenomena here noted allow no other conclusion to be drawn than that the hypersecretion of the gastric juice is to be attributed directly to pathological changes in the spinal cord.—*Deutsche med. Wochenschrift*, October 15, 1885.

THERAPEUTIC VALUE OF THALLIN AND ANTIPYRIN.—The powerlessness of antipyretic agents to modify the actual course of continued fevers or to shorten their mean duration is, we believe, admitted by the large majority of clinical physicians. M. Jaccoud has communicated to the Académie de Médecine the results of a clinical investigation into the antithermic effects of thallin and antipyrin. The medicament has been administered by him in a systematic manner to reduce the pyrexia of typhoid fever, tuberculosis, and pneumonia. It is asserted that no other substance, given in such small doses, produces so marked an effect on the temperature as thallin. The nature of the disease appears to exert some influence on the duration of the antipyretic effect, which was most prolonged in cases of tuberculosis. Hardly, however, does the thermometer reach its lowest register before the temperature begins to rise again. When the temperature begins to fall copious sweats commence, and are the more abundant as the descent of temperature is more pronounced. The perspiration ceases when the temperature begins to rise. Thallin should be cautiously administered, since there is sometimes much danger of collapse setting in. Occasionally the administration of thallin, as with antipyrin, is attended with the appearance of a cutaneous eruption. As a rule, the eruption takes the form of papulous erythema, which are at first minute, but gradually acquire larger dimensions. This erythema usually commences to appear on the internal aspects of the knees, and spreads afterwards on the extensor surfaces of the limb.

So far as is at present known, the rash has not been noticed on the face. The average duration of the eruption is three days, but it may last two days longer. This complication is much more frequent with antipyrin than thallin. As the result of his clinical investigations, M. Jaccoud finds that thallin is a far more powerful antipyretic than antipyrin, but he asks the pertinent question whether it is useful to employ these medicaments. It appears that both prevent the axillary temperature from reaching its usual height for a certain time, but neither has any certain influence over the central temperature of the body, which remains at its usual height, even if it be not augmented. The peripheral cooling does not benefit or relieve the distress of the patient, but rather weakens him. The effects, indeed, are of an illusory nature. M. Jaccoud finishes by saying that these agents cannot be regarded as constituting real acquisitions to medical therapeutics.—*The Lancet*, November 7, 1885.

HYDATID TUMOR OF THE THYROID BODY.—DR. MEINERT, of Dresden, reports the case of a girl aged fourteen, in whom a swelling of the thyroid body for the last few months had occasioned great difficulty in breathing, during labor or in ascending steps.

The remaining members of the family were healthy, and no goitre had ever existed in them. When about four years of age, when convalescent from typhoid fever, the neck of the patient had been lanced for abscess of the parotid (?), and the tumor first made its appearance a few days after. Until eight years of age, the swelling increased uniformly, continuing to grow until it reached its present size, that of a large orange, and situated almost in the median line.

On account of absence of fluctuation, the growth was at first considered to be scrofulous. Treatment with injections of alcohol was first resorted to, and the slight resistance to the introduction of the needle at once attracted attention.

Exploratory puncture gave exit to a thin watery fluid, absolutely colorless, a result which was entirely unexpected, having never been confirmed in previous operations upon strumous conditions of the gland.

Consultation being held, incision was recommended, and being made, a pure white cyst rushed from the wound *in toto*. No scolices or daughter cysts, however, were found. A drain was introduced, and in three weeks the wound was healed.

The origin of the cyst is supposed to be traceable to the presence of a family dog, which was the constant playmate of the child, the tænia having been introduced into the wound made to relieve the abscess, occurring subsequent to the attack of typhoid fever.

The case is probably the first recorded instance of hydatid tumor of the thyroid body.—*Centralblatt für Chirurgie*, 1885, No. 24.

A CASE OF DISLOCATION OF THE FIRST CERVICAL VERTEBRA; RECOVERY.—DR. R. H. CARTER reports the case of a sailor who fell from the rigging of his vessel, a distance of about twenty-five feet, striking the back of his neck or head on a rope eight or ten feet above water. When he struck the water he had a slight convulsion and lay motionless. Examination showed the occiput

drawn well back and down as far as possible, the chin projecting forward but not raised.

Pressure in the furrow behind the occiput was unendurable, producing great pain and a general tetanic condition.

The symptoms resembled those of strychnia poisoning, save that the face was unaffected. The left arm was blue, cold, sweating profusely, rigid, and absolutely powerless. The right arm was powerless, but less rigid than the left.

The legs were not paralyzed but rigid and clumsy. Sensibility was at first present, but later was lost, and the patient was unable to swallow even his saliva.

Every attempt to bring the head forward produced unconsciousness, during which he was flaccid; on recovery, there was a succession of spasms, the extensor muscles being very rigid.

The finger being introduced into the pharynx forward, displacement of a vertebra was discovered at its upper border, and diagnosis of displacement of the first cervical vertebra on the second was made.

A full dose of chloral having been administered by enema, the head was strongly lifted and slightly extended and rocked, by an assistant, while Dr. Carter made pressure with his thumb upon the projection of the pharynx. After manipulation lasting from one to two minutes, the projection yielded and the head came into position. The patient was able to swallow immediately and within two days the general symptoms resulting from the fall had disappeared, except the vasomotor derangement in the left arm, which in a measure was persistent sixteen days after the accident.—*The Medical Record*, September 5, 1885.

ARTHRITIS OF THE OSSICULA OF THE EARS; THE USE OF IODIZED FUMIGATIONS IN VARIOUS AUDITORY AFFECTIONS.—M. NOËL GUÉNEAU DE MUSSY, in the last volume of his clinical lectures, devotes some time to the study of a form of deafness produced by arthritis of the auditory ossicles. Such deafness is peculiar in the fact that under excitation and shock to the ear, it diminishes. Thus the noise of a carriage, locomotive, or a very sharp sound, may momentarily reestablish the sense of hearing in those persons who ordinarily hear almost nothing.

The form of this affection which accompanies gout, has a great tendency to become chronic, and cause complete loss of hearing. Care, however, enables the affection to be treated with a certain degree of success, and every auditory congestion and cold should be avoided.

At the end of a few days from the beginning of the symptoms, resort should be had to iodine fumigation by placing in the meatus a plug of iodized cotton enveloped in wadding, care being taken that the thickest portion of the plug corresponds to the opening of the external ear.

At the end of from 24 to 36 hours the plug should be renewed.

The same process may be adopted in the treatment of parenchymatous metritis, or other affections where the use of iodine is desirable. In the last-named affection, M. de Mussy has obtained notable decrease of the uterine engorgement.

In women disposed to hemorrhage the remedy is contraindicated, as favoring its occurrence.—*L'Abeille Médicale*, October 26, 1885.

PARALYSIS OF THE RECURRENT LARYNGEAL NERVE IN CHRONIC LUNG DISEASE.—BAUMLER, in the *Deutsche Archiv für klin. Medicin*, Bd. xxxvii. Hft. 3 und 4, reports some observations in which paralysis of the recurrent laryngeal nerve occurred, as a result of a chronic inflammatory condition of the lungs occasioned by inhalation of dust, and attended with extensive formation of new tissue.

In these cases there was chronic indurative neuritis of this nerve, which was the result either of chronically inflamed bronchial glands in its neighborhood, or of inflammation derived from the nutrient bloodvessels.

In the first case, that of a miller, aged 61 years, in whom the cause of hoarseness was recognized by the laryngoscope to be a left sided recurrent paralysis, post-mortem examination showed slaty induration of the apices of both lungs, and overgrowth of the left recurrent laryngeal beyond the point at which it turns round the aorta, by a very firm, densely pigmented bronchial gland.

In a second case, post-mortem examination revealed the presence of callous induration, and bronchiectatic cavities in the apices of both lungs, together with true cirrhosis of the left recurrent nerve at its point of origin from the vagus. In this case there was present an easily recognized arteritis obliterans in the vessels in the territory of the diseased nerve.—*Centralblatt für klin. Med.*, October 17, 1885.

THE TREATMENT OF RACHITIS BY PHOSPHORUS.—GRIEBSCH, *Jahrbuch für Kinderheilkunde*, 1885, Bd. xxiii. Hft. 1 und 2, reports forty-one cases of rachitis treated with phosphorus according to the prescription of Kassowitz, *i. e.*, in the form of an emulsion, and in most instances with accompanying salt baths.

In four cases cure resulted after the use of from one-sixth to two-thirds of a grain of phosphorus. In eleven cases the improvement was marked, in eight insignificant, in twelve nil, and in six the condition became worse.

Of the special manifestations of the disease, the following is noted:

Cranial rachitis occurred in forty-one cases. In seventeen, no change was noted; in nineteen, improvement; in one, the condition in a short time was aggravated.

In rachitis of the ribs and lower extremities, the treatment was without result.

Kyphosis existed in ten cases, and was benefited in three instances, continued in six, and grew worse in one. The weakness of the lower extremities, as well as the general debility, was uninfluenced in seventeen cases, while in the remainder the results were such as, in the opinion of the author, might easily have been accomplished by other treatment.

In view of the results obtained, Dr. Griebsch concludes that phosphorus is of but small value in the treatment of rachitis, and cannot be considered as a specific, and even questions whether, as a remedy, it is

sufficiently safe to be used without caution.—*Centralblatt für klin. Medicin*, October 17, 1885.

HABITUAL ABORTION DUE TO RENAL DISEASE OF THE MOTHER.—DR. FEHLING of Stuttgart, calls attention to the fact hitherto unrecognized, that renal disease in the mother may give rise to habitual abortion, and cites the history of several cases in proof of the correctness of his view.

The first case related was that of a woman who aborted six times in succession. Each time, about the fifth or sixth month of pregnancy, oedema of the entire body ensued, and albumen was abundant in the urine, miscarriage occurred about eight weeks subsequent to the symptoms of the death of the foetus. All the placentae were small and atrophied and the decidua thickened. Syphilitic remedies were prescribed in vain by the family physician.

In a second case, about the middle of pregnancy, symptoms of the death of the foetus occurred, concomitantly with the presence of an abundance of albumen in the urine. This diminished under treatment, but abortion occurred nevertheless, the foetus being mummified. After the accident the albumen disappeared from the urine. A third and fourth case, likewise recorded, exhibited similar symptoms, abortion occurring in each, and in one instance the nephritis being first recognized by the ophthalmoscope.

Fehling's observation is interesting, as being the first to recognize renal disease as a causal agency in the production of abortion.—*Centralblatt für Gynäkologie*, October 10, 1885.

EXPERIMENTS ON THE VITALITY OF THE BACILLUS OF PHthisis.—PROFESSOR G. SORMANI and DR. E. BRUGNATELLI, of Pavia, have recently instituted a great variety of carefully conducted experiments to determine the action of various chemical reagents on the vitality of the bacillus of tubercle. These experiments are embodied in a pamphlet lately published, entitled "Ricerche Sperimentali sui Neutralizzanti del Bacillo Tubolare."

The sputa of undoubtedly phthisical cases were mixed with certain medicaments, thirty-six in number. A portion of each mixture was injected either into the subcutaneous cellular tissue or into the peritoneal cavity of numerous guinea-pigs. The effects were carefully noted, and the animals subjected to a rigorous post-mortem examination. Of the medicaments used, the following were found to exert a strong neutralizing effect—in fact, in most cases the animals retained their full health, no trace of tubercular deposit being discovered on examination after they had been killed. The neutralizing power of the medicaments was found to stand in the following order, beginning with the least active: Lactic acid, camphoric acid (a saturated solution), camphor (a saturated alcoholic solution), bromide of ethyl, naphthol β , turpentine, chloride of palladium, creasote, naphthol α , phenic acid, and bichloride of mercury. Professor Sormani is still continuing his experiments, and one in particular he has made at the suggestion of Dr. Hassall. The sputa were dried at a low temperature, and were then mixed with olive oil,

which was allowed to be in contact with the powder for some time until it had become well saturated with the oil. This experiment was undertaken in the belief that the vitality of the bacillus would be impaired by the exosmotic action set up by contact with the oil. Dr. Sormani writes as the result of the experiment: "I find an action of attenuation in which the bacillus by preference is multiplied in the lymphatic glands, and not in the viscera."—*The Lancet*, November 7, 1885.

THE VESICATING PROPERTIES OF METHYL IODIDE.—DR. ROBERT KIRK, in discussing the merits of methyl iodide as a vesicating agent, concludes as follows:

From the preceding statement it will be observed that the iodides of both ethyl and methyl are more powerful agents than the strong tincture of iodine already mentioned, and which Dr. Churchill considered the best of all applications to the cervix uteri. As distinguished from most other agents which are applied to the cervix or the interior of the uterus, iodine is characterized by its tendency to produce a serous instead of a plastic exudation, but in this respect it is much surpassed by its methyl and ethyl compounds. These circumstances point to the two latter bodies as peculiarly applicable where such effects of iodine are deemed desirable; and I have found the application of methyl iodide to the cervix have a remarkable effect in relieving pain in some forms of uterine disease. For milder effects and for application to the interior of the uterus the ethyl compound is an excellent agent. The effect of this body applied on a Playfair's probe to the fundus, and retained there one minute, is often remarkable. A few days afterwards the cervix has generally the soft feel and even the somewhat purplish tinge of the cervix of pregnancy. The cervical canal will frequently admit a sound which could not previously be passed; while pain is almost invariably relieved.—*The Lancet*, October 24, 1885.

NEW LOCAL TREATMENT OF ECZEMA AND OTHER CUTANEOUS DISEASES.—DR. GÉCÉ has recently made trial of the local treatment of eczema by ichthiol applied by means of a thin dressing of some sufficiently strong, but pliable substance, acting as an artificial epiderm, and at the same time combining medicinal treatment with the advantage of being able to be applied by the patient.

The dressing adheres without the use of a bandage, and is applied by simply moistening with warm water, and needs only to be renewed every three or four days.

In acute eczema and chronic eczema, especially that of the lower limbs, where the application affords methodical compression, and in prurigo and lichen, the first application has given favorable results. In psoriasis the results have been encouraging, but further experience is necessary to determine the real value of the remedy.

To apply the dressing, it should be permitted to rest for an instant upon warm water of a temperature which can be supported by the hand, and smoothly applied.

If any difficulty is experienced in removing the dressing, a corner should be raised and moisture applied by wetting both sides, when it will be found to come away easily.—*L'Union Médicale*, October 31, 1885.

THE MEDICAL NEWS.

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SATURDAY, NOVEMBER 21, 1885.

RESECTION OF THE JAW FOR ANCHYLOYSIS.

It is a very remarkable thing to find an operation, which would seem to be so natural as this, among the most recent and rarest in the history of surgery. And yet, so far as available statistics indicate, resection of the lower jaw, at the joint, for ankylosis, has been done only in about thirteen cases, and of these only three have been in this country. The first operation was performed, in 1874, by Dr. S. D. Gross, and the other two were done, in 1875 and 1884, by DR. J. EWING MEARS. The first of Dr. Mears's operations is reported in the *Transactions of the American Surgical Association* vol. i., and from a short historical sketch of the subject, which is appended, it may be seen that a number of surgeons have come quite near the idea of this operation. One of the earliest was Dr. Carnochan, of New York, who, in 1840, suggested the removal of a segment of the lower jaw in order to restore its mobility; while independently, although fifteen years later, Esmarch proposed a similar operation, which is now known by his name; and, in 1857, Rizzoli divided the jaw in front of a cicatricial contraction, and inserted gutta-percha plates to prevent subsequent union of the divided surfaces. None of these operations, however, is to be classed with resection of the jaw at the joint, a procedure which should properly be credited to Bottini, who, in 1872, communicated to the Royal Academy of Medicine of Turin a case in which he did a subperiosteal resection of both condyles for permanent closure of the jaw. He was the first to operate directly upon the joint, and the result was most excellent.

In 1874, the elder Gross, in a case of complete

synostosis of the lower jaw of the left side, in a girl seven years of age, excised the condyle along with a portion of the neck of the bone, through a curvilinear incision in front of the ear, and established excellent motion. König, in 1876, did a resection of the left temporo-maxillary articulation for ankylosis, and he operated in the same way again in 1877. Both cases were entirely successful. His method of operating is as follows: An incision, about an inch long, is made over the lower border of the zygomatic process, and another, about two-thirds of an inch long, is made perpendicular to, and descending from the former. The latter incision is carried only through the skin, so as to avoid the facial nerve. Through this opening, after cutting some of the fibres of insertion of the masseter muscle, the articular process of the maxilla is cleared with a raspary, after which it is carefully separated from the ramus with a chisel, and removed from the cotyloid cavity. König reported these cases in the *Deutsche Zeitschrift f. Chirurgie* in 1878, and recommended removing the coronoid process also when this might be necessary. At about the same time, and apparently independently of any suggestions, von Schultén operated upon both sides of the jaw, commencing with the removal of the coronoid processes. König's method has been followed, with slight modifications, once by Ranke in 1878, and twice in 1885; once by Hagedorn, in 1880; and once by Langenbeck, in the same year; while Kullenkampf reports an operation in the *Centralblatt f. Chirurgie* of this year as done by the method of Mears.

When to this list is added another operation by König, in which the patient died of chloroform narcosis, we have a concise history of the operation of resection of the lower jaw, at the joint, for immobility. In analyzing the cases reported, and more particularly the interesting paper upon this subject by Mears, already referred to, and a recent one by RANKE, in the *Archiv f. Chirurgie*, Bd. xxxii. Heft 3. 1885, we observe that the operation is not so clearly defined as to its indications, or its mode of performance as one might at first sight suppose. As now understood, it may be described as an excision of the articular process of the inferior maxilla for ankylosis, with subsequent freeing of any adhesions, cicatricial, muscular, ligamentous, or bony, which stand in the way of its success. But it is clear that the operation of excision of this part of the bone is wholly out of place as a means for the restoration of motion which is impeded solely by contraction of the soft tissues. For this, other measures may be successfully employed. The operation cannot, moreover, be considered as strictly applicable to the cure of irreducible luxations, although it has been twice done successfully for this object. For its legitimate purpose, however,

there can be no question that it is deserving of a high place in the list of approved surgical measures. In the perfection and permanency of its results it leaves little to be desired. The old methods of wedging and prying open the jaw were harsh and comparatively fruitless. This is painless to the patient, and almost absolutely safe, if properly carried out.

But what is the best method of doing the operation? To this question we think it is safe to answer as Ranke does, namely: to make the first incision of König over the lower border of the zygomatic process, and to omit his second, perpendicular to it. When it comes to the separation and removal of the piece of bone, we would strongly urge the advantages of drilling it out with the rapidly revolving burr of the so-called "dental engine" invented by Dr. Bonwill, of this city. When this machine is used by one who understands its management, its work is vastly superior to anything which can be done by the chisel and mallet, even in the most accomplished hands. As it is, unfortunately, not always available, the next best method is to use the chisel as carefully as possible. In some of the operations reported, the bone forceps, or the saw, has been used. But these have all been cases in which there was much more than a simple excision of the articular process. That of Dr. Mears was a removal of quite half of the ramus. Peculiar circumstances, such as there existed, may demand the resection of so much bone, but in its simplest form the operation should not contemplate this.

Before closing, it may be well to refer to a proposition made by Bassini, of Milan, in 1879, to correct ankylosis of the jaw, by removing, with a small trephine, a portion of the neck of the bone. This method has much to commend it where it is feasible, but it differs only in degree from the earlier operations in which the bone was divided at different points below the seat of the adhesions. Ranke thinks it is open to the objection applicable to all of them, namely, the liability to speedy reunion. That may be, or not, as experience may decide. At any rate, the operation of excision at the joint, with which the names of Bottini, Gross, König, and Mears are justly to be associated, is one which may be commended to further trial on the part of surgeons who have to deal with otherwise incorrigible ankylosis of the jaw.

CHOREA.

THE etiological and pathological relations of chorea are still obscure, and widely divergent opinions prevail on many questions connected with the disease. A much debated point is the association of it with rheumatism, the percentage of cases connected with this disease ranging in the tables of different authors from two or three to twenty-five or

thirty. It is certainly true that a considerable number of all choreic patients have joint pains, which are usually attributed to rheumatism, but JOFFROY and his pupil, SARIC, in *L'Union Médicale*, Sept. 22, regard them as choreal arthropathies associated with the nervous affections, and not necessarily of rheumatic origin.

In support of this view they refer to the absence of fever, the fugitive character of the pains, the small number of joints affected, often of one side only, and the absence of heat, or swelling. The cardiac troubles they attribute chiefly to functional disturbance. They regard the disease as a cerebro-spinal neurosis associated with the evolution of the nervous system, and, in the female particularly, with the development of puberty. The influence of psychical causes—fright, emotion, imitation—in causing the disease, the intellectual disturbance, the predominance of the trouble on one side, and the character of the motor and sensory affections without any constant pathological lesion, point, they think, to a neurosis. That the spinal cord is also affected is shown by the abolition, or diminution of the reflexes in twelve of sixteen cases, and by the arthropathies which may be considered as trophic lesions of the joints.

Joffroy's views of chorea as a neurosis of growth are not new, but the suggestion of the relation of the joint affections to the cerebro-spinal trouble is worthy the attention of those interested. With reference to the participation of the spinal cord in chorea, we may refer to the interesting observations of Dr. Money on the experimental production of the disease in animals. By injecting a particulate liquid into the carotid, he has produced involuntary movements indistinguishable from those of chorea, and this was found to be associated always with embolism of the capillaries of the cord. The movements induced were both irregular, as seen in the chorea of man, and rhythmical repetitions of one movement as in the ordinary chorea of dogs.

DR. H. C. WOOD has recently given a statement of his views on this subject, and adduced further evidence in favor of the participation of the cord in the disease. In two choreic dogs, after section of the cord, the movements still continued, as had been demonstrated by Chauveau, and this experiment proves conclusively that, in these animals at least, the movements originate in the cord. But further, in four cords from cases of canine chorea, there were found, in three, mild grades of infiltration of leucocytes in the gray matter, and in the fourth, in which the animal had died of the disease, the ganglion cells were degenerated, and in some places had disappeared altogether. He concludes that choreic movements may depend upon a diseased condition of the motor cells of the cord, a condition, in most in-

stances, not sufficiently marked to be noticed with our instruments, but in others it may go on to produce changes in the ganglion cells, or even their total destruction. There are at least five or six cases of human chorea in which there have been observed distinct lesions of the spinal ganglionic cells, and in some instances embolism of the antero-lateral arteries of the cord, as recorded by Ross. But, as Kirkes originally suggested, and as the investigations of Jackson, Broadbent, Bastian, and others have shown, there are other instances in which capillary embolism about the basal ganglia seems to stand in causal connection with the phenomena of the disease. Neither the cerebral nor spinal changes, however, are constant, as cases have been examined in which no definite lesions could be determined.

Many of the clinical features of chorea are quite inexplicable on the embolic theory—as the production by fright, or imitation, the influence of season, as pointed out by Mitchell, the rapid cure by arsenic, and its occurrence in epidemic form, as happened repeatedly during the middle ages, and in the early part of this century in Tennessee and Kentucky, as reported by Robertson in 1805. We must suppose, therefore, the disease to be produced by a variety of causes. Dr. Wood defines the chorea of childhood, as “a diseased condition of the ganglionic structures of the cerebro-spinal axis, which abnormal state may exist without alterations of structure sufficient to be determined by the microscope, or may go on until it is accompanied by marked structural lesions. Further, this condition must be looked upon as one of lowered tone, and it must be allowed that it may be produced by various causes.” An important point has always been duly insisted upon by Hughlings-Jackson, namely, that we must suppose in chorea over-activity of some nerve elements to account for the coexisting over-movement. It is absurd to suppose that from cells in a state of advanced degeneration, shrivelled and wasted, motor impulses, active though irregular, could proceed. Such destruction could account for paralysis, but surely not for over-movement. Hence it can scarcely be a condition of lowered tone.

In spite of the occurrence of choreic movements under various conditions, and the multiple origin of the disease of childhood, we may still look upon chorea as a distinct nosological entity. Dr. Wood does not regard it as such, holding that the word should be employed “as analogous to, or having equal rank with, paralysis or tremor;” but after excluding the cases of post-hemiplegic, of rhythmic (hysterical), and of electric chorea, there remains the affection of childhood with its well-marked characters, which is as much deserving of recognition as a separate disease, as is epilepsy, or tetanus.

ELECTRICITY IN OBSTETRICS AND DISEASES OF WOMEN.

SEVERAL interesting contributions relating to the uses of electricity in obstetrics, and in diseases of women, have recently appeared. Among these, may be mentioned the application of this agent in the cure of extrauterine foetation, by DR. LANDIS, in *The American Journal of the Medical Sciences*, for October, papers presented by BAVER and LOEWENTHAL to the Gynecological Section of the German Society of Naturalists and Physicians, which appear in the *Centralblatt für Gynäkologie*, October 17th, a paper by APOSTOLI and DOLÉRIS, upon the treatment of periuterine hæmatocoele by galvano-puncture, published in the *Archives de Tocologie*, November, and a paper upon electricity as a therapeutic agent in gynecology, read before the New York Academy of Medicine by DR. MUNDÉ, which appeared in *THE MEDICAL NEWS* of last week.

From experiments upon insects, minnows, and rabbits, Dr. Landis has been led to conclude that the faradic current, in extrauterine pregnancy should be applied for an hour, if the patient can bear it so long; it should be applied repeatedly, and it should for at least one sitting be used in great strength.

Bayer reported four cases in which the constant current was used for the induction of premature labor. The first was a 5-para, who in her four previous labors had been delivered of dead children by podalic version. At the end of nine lunar months the constant current was used, and after the first application labor pains were excited, while after the sixth the mouth of the uterus was completely dilated: a living child was born, but it survived only ten days. In the second patient pains were also promptly excited by the constant current, and she gave birth to a living child which died in six hours. In the third the os uteri was dilated after seven applications, but the pains always ceased after the interruption of the current. At the expiration of three weeks and a half spontaneous labor occurred at the normal time, and a living child was born. In the fourth patient, after nine applications, a gangrenous ulceration of the cervix appeared; when this healed the application was renewed, with at least a partially satisfactory result.

Bayer concludes that the constant current excites uterine contractions, dilates the os, and removes cervical stricture. He very justly remarks, after referring to the fact that the results are not the same in all cases, that a brilliant effect is only had when the uterine musculature is very good, and the neck is not very rigid.

In the discussion of the paper, Homburger stated that he had failed to increase the labor activity in a primipara by this means, but that in two cases of

uterine fibroids attended with metrorrhagia, in which ergot had been used without benefit, the constant current gave an excellent result. Schatz regarded it as very probable that the uterus, like the heart, had nerves, which not only strengthened the activity of contraction, but also some which weakened it; and that the nearer the subject is to the end of pregnancy, the more quickly and certainly various means for the induction of labor act. Müller, in one case, had a very satisfactory result in the induction of labor by the constant current, while in five others, on the contrary, it failed.

It is evident, from this discussion, that we cannot accept the use of the galvanic current as a certain means of inducing labor.

Loewenthal, in a series of cases of chronic metritis, used at first faradization, then the mixed currents: the effect, especially of the latter, was prompt and lasting, so that uteri, the cavities of which measured five inches, were reduced until they measured only about three inches. The other cases in which electricity was used successfully were those of genital neuroses.

As to the method of application, Loewenthal always places the cathode in the uterus, and the anode upon the abdominal wall; the current should at first be weak, the strength gradually increased, and again made weaker before withdrawal. Thus the application is painless, but the effect is greater and more lasting if the current be suddenly interrupted. The electrode should not be placed in contact with the anterior vaginal vault, because severe pain is thereby produced. The sitting should be only from five to ten minutes, and ought never be continued more than fifteen minutes. He found no benefit from the continuous current. He regards electricity as of no value in the treatment of positional disorders of the uterus, except in relieving the nervous symptoms which may be connected with them, and he considers the mixed currents as only indicated in the treatment of chronic metritis and genital neuroses.

Loewenthal's denial of the value of electricity in positional disorders of the uterus is too positive, as one may see by referring to Tripier's *Leçons Clinique sur la Maladies des Femmes*, Paris, 1883. Several cases of uterine deviations—both versions and flexions—are there narrated, which were cured by faradization. The results obtained by Tripier have been in part confirmed by experiments made in the dispensary department for diseases of women in the Jefferson Medical College Hospital. These were conducted by Dr. Graydon, and in some cases uterine flexions were cured by this means, the instrument and electrodes advised by Tripier being used, and his method strictly followed. An objection to the treatment of uterine deviations by elec-

tricity is the long period required—in some instances six months, and hence the difficulty in securing the regular and continued attendance of patients.

Apostoli and Doléris report a case of retrouterine hæmatocoele occurring in a woman forty years of age, which was opened nearly six weeks after its appearance, by negative galvano-puncture through the vagina. The positive pole is put in connection with a cake of clay upon the abdomen, or upon one of the thighs; the force of the current should reach one hundred milliampères, and usually the application is continued five to ten minutes; the cauterization should penetrate from about four-tenths to eight-tenths of an inch. Should the puncture open a large vessel, and serious hemorrhage follow, the arrest of this is at once made by forced dilatation of the vagina by means of Gemrig's speculum, which is kept in place for some time.

We fail to see in the history of this case any advantage from this method of opening the hæmatocoele, which could not have been attained, had this been done by the thermo-cautery, or the galvano-cautery knife. It is claimed, however, by the author, that the method used, not only secures a large fistulous outlet, but also creates in the blood-mass an intimate process of disintegration, followed by a rapid regression.

A very full abstract of Dr Mundé's paper having been so recently given in THE NEWS, it is unnecessary to repeat this in even a condensed form. Our belief is, that the author does scant justice to the intrauterine galvanic pessary, and that he asserts too positively that the instrument owes its value to its being a foreign body: this last statement may be true, but any one who has observed the rapid corrosion of the zinc portion of the pessary, will not regard it as impossible that some galvanic action is developed while it is in the uterus. Our experience authorizes us to assert that a faithful trial of this instrument properly applied, and in suitable cases, has been followed by results that we believe could not have been otherwise obtained.

Dr. Mundé's paper, however, is a most valuable and timely contribution to the subject of electricity in diseases of women.

SOCIETY PROCEEDINGS.

OBSTETRICAL SOCIETY OF PHILADELPHIA.

Stated Meeting, November 5, 1885.

THE PRESIDENT, B. F. BAER, M.D., IN THE CHAIR.

LYMPHATIC LEUKÆMIA IN CHILDHOOD.

DR. JOHN M. KEATING read a paper on this subject, which is particularly interesting on account of its clinical rarity and the infrequency with which we meet the disease in current literature. He prefaced it with a few

remarks on the blood in children in health, and also spoke briefly upon its condition in disease.

(See page 562.)

DR. GOODELL inquired whether there are any distinguishing points between purpura hemorrhagica and lymphatic leukæmia. If there is a deficiency of red blood-corpuses, why do red patches occur so easily?

DR. KEATING remarked that the subject under discussion was dependent upon certain conditions which physiologists are still debating. In leukæmia we have, as a diagnostic feature, an involvement of the lymphatic system more or less, a hyperplasia of the tonsils, lymphatic glands of the peritoneum and of the intestines, also of the spleen and bone-marrow, all of them being more or less connected with red-cell formation, but the principal diagnostic point is the increase in number of the colorless cells, as is noted in Dr. Osler's report. The hemorrhages in these cases are possibly due to a diapedesis or capillary rupture. In what is known as purpura hemorrhagica there is an exudation of blood cells, or the hematin from their destruction into the recta mucosum and the papillary layer of the cutis; of course, capillary ruptures may occur with profuse hemorrhage. The blood cells (red) are usually diseased, they become crenated or they cease to form rouleaux, and possibly the plasma may be at fault. The microscope alone will reveal the distinguishing features. Purpura may be considered a symptom accompanying a dyscrasia in which the blood itself is involved, not merely the organs of its production.

DR. WILLIAM GOODELL exhibited the ovaries from two cases of oöphorectomy with the following histories:

OÖPHORECTOMY FOR OVARALGIA.

When the patient, an unmarried woman aged thirty, first consulted him, she weighed two hundred and thirty-six pounds, but at the same time she was very weak and could barely walk. She suffered excessive pain at her catamenial periods, which appeared only at long intervals. She had cataleptic and hystero-epileptic fits, and complained of very constant and acute ovarian pains. Her urine was passed but once a day and this act was attended with much suffering. The womb was enlarged and the ovaries were very tender indeed, but nothing else abnormal was discovered. Asafetida and the bromides were prescribed in large doses, and she was advised to try the rest treatment.

Fourteen months later she was again brought by her physician to consult Dr. Goodell. She now weighed only one hundred and twenty pounds, having lost one hundred and sixteen pounds, and she was in every respect worse, her ovarian pains being now constant and acute, requiring large doses of morphia to control them. Her catamenia had not appeared for nigh four months, and tonics seemed to have no effect whatever on her. Her physician was compelled to be in constant attendance and was liable to be summoned at any hour, day or night, to give her a hypodermatic injection. Masturbation was suspected, but she always denied the practice. Nothing further could be done than the operation of oöphorectomy, which was accordingly performed a few days later at the hospital of the University. The ovaries were found much enlarged from cystic and interstitial degeneration, but there were no evidences of

peritonitis or of cellulitis, which had been suspected. A corpus luteum existed in one ovary, a rectal hemorrhage or vicarious menstruation having taken place a few days before the operation. Her ovarian pains at once left her; she needed but very few doses of opium, which were given by rectal suppositories. Her convalescence was prompt and she returned home in less than four weeks free from all pain, and in a fair way to get perfectly well. The case was a typical one of the advantages of oöphorectomy, yet he thought that the operation is being performed altogether too frequently.

OÖPHORECTOMY FOR BLEEDING FIBROID OF THE WOMB.

In this case the lady was thirty-seven years of age, and had been married eleven years. She gave birth to a child about seven years ago, and since then has had one premature birth at seven months and one miscarriage. She first noticed an abdominal tumor nine years ago, but her catamenia began to be free some time before this. Late in the year 1881 the catamenia began to be excessive. As nothing served to check them, early in the following year Dr. Goodell was consulted. He found multiple fibroids of the womb. Six tumors could be readily made out, of which two seemed pedunculated; the sound gave a measurement of 4.5 inches. Under ergot and ammonium chloride the patient improved for several months; then the menorrhagia became worse, and finally a dribbling of blood kept up between the periods. In May of the present year she again consulted Dr. Goodell. She had been dribbling continuously since January, and was much reduced in strength. Being a brunette, she exhibited the facies uterina in a marked degree, the pigmentation being very dark and extensive. The womb now measured 7.5 inches. She was admitted into Dr. Goodell's private hospital, and on May 24 both ovaries were, without difficulty, removed. They were greatly enlarged by follicular degeneration, a condition which Dr. Goodell had repeatedly seen in cases of fibroid tumor. The effect of the operation on the tumors, and especially on the main one, was astonishing. After two weeks this fibroid had diminished in length nearly a hand's breadth. Her recovery was prompt, and she was sent to Atlantic City to recruit. On July 10, just forty-seven days after the operation, she called on Dr. Goodell, who found the tumors very greatly reduced in size, and the uterine cavity measuring only 3.25 inches, a diminution of 4.25 inches.

This extraordinary amount of diminution, in spite of the fact that the obliteration of the ovarian bloodvessels cut off only a small portion of the blood-supply to the womb, drove him to the conclusion that the ovaries were the important factors in inviting blood to the womb. Every successful case in which he had removed the ovaries for fibroid tumor of the womb had been followed by the menopause and by rapid diminution in the size of the tumor. But in his hands, and in those of others, this operation was more fatal than that of ovariotomy. During the ten months of the present year he had had twenty-five cases of ovariotomy, with but one death, and that one in a lady operated on at her home, two hundred miles from Philadelphia. For simple cases of oöphorectomy the mortality should not be greater than that of ovariotomy. But when complicated with the presence of a large or an adherent fibroid

tumor, the operation is often one of great difficulty. Twice during the past year he was unable to reach the ovaries, and was compelled to abandon the operation, because in neither case was the woman willing to undergo the risk of having hysterectomy performed. Each case recovered; and while the women were under observation the tumors appreciably lessened in size, as if the shock of the exploratory incision had temporarily suspended the ovarian influence.

DR. MONTGOMERY was glad to hear the good results of Dr. Goodell's cases. In a few of the cases upon which he had operated, the menopause did not at once occur, sometimes not for two years after the operation. In such cases the tumor did not decrease in size while menstruation continued. In the case of hysterectomy for fibroid tumors, reported by Dr. Montgomery at the last meeting, the temperature at no time exceeded 101° , and the patient left the hospital to-day perfectly well. He preferred removal of the uterus and its appendages entire when the ovaries cannot be removed in consequence of previous inflammatory changes. Ligation of bloodvessels supplying the tumor might be useful when nothing better could be done.

DR. BAER thought that when the ovaries can be removed, it is the preferable operation.

DR. GOODELL has been so uniformly successful in removing the ovaries for the cure of fibroid uterine tumors that it is his choice. He has been notified that in a case of fibroid tumor of the womb in a woman aged thirty-two years, he will be called in consultation; this will be the third. He will advise removal of the ovaries; if at the time of operation that is not found possible, he will close the incision, as the other operation is very dangerous, and the patient can certainly live a few years as she is. In one case only of his oophorectomies has the menses continued, and he thinks that in that case these must have been some supplementary ovarian tissue.

OVARIOTOMY.

DR. MONTGOMERY exhibited for Dr. Warden a large ovarian tumor, and related the following history: The patient was a young woman. Her menses commenced at seventeen years of age, and had always been irregular. They ceased entirely for twelve months, and at the same time the abdomen was enlarging until the tumor reached above the navel. Fluctuation was doubtful; the mass seemed quite solid, and pressed the uterus down into the pelvis. Anæsthesia did not relax the abdominal wall, and diagnosis was doubtful. An exploratory incision, showing the pearly tint of an ovarian tumor, made it sure. Nothing would pass through the trocar but some of the jelly-like contents of the tumor escaped beside it, and passed into the abdomen. The large cyst was filled with small cysts. The patient did well for one week, when the pulse became rapid; but she has since been doing well, and is now rapidly recovering.

DR. GOODELL thought the danger from the escape into the abdomen of cyst contents is overrated.

DR. BAER said that in the early stage of ovarian tumors metrorrhagia is sometimes present; sometimes the menses are entirely absent. He should like to hear from the Society some reason for this inexplicable difference.

DR. GOODELL has observed the same fact, but can throw no light upon it.

DR. MONTGOMERY remarked, that in this case both ovaries had undergone cystic degeneration. The second ovary contained numerous small cysts.

DR. BAER inquired about the treatment of the second ovary.

DR. MONTGOMERY replied that it was removed.

DR. CHARLES HERMON THOMAS read a paper on.

SOME USES OF COCAINE IN GYNECOLOGY.

(See page 567.)

DR. KEATING has used cocaine for some time in the same class of cases. He now uses eight per cent. solution with great success, especially in children's throats. He employs salicylate of cocaine in diphtheria in a five or six per cent. solution; sensibility disappears in a short time, and he can then use any application without discomfort, he applies carbolic acid, tincture of iodine, etc., in this manner without exciting pain. He also applies cocaine before injecting carbolic acid into piles, and also applies it on cotton to prevent its action from ceasing too soon.

DR. THOMAS said that the strength of the solution may, with propriety, be greatly varied, and that in his practice upon the eyes even a one per cent. solution is strong enough to be of considerable value in conditions of irritation produced by foreign bodies in the eye; but in other cases, as urethral caruncle, it may be well to use it even in saturated solution. The question of strength is largely a question of expense, for in local application no toxic results are likely to be produced.

NEW YORK SURGICAL SOCIETY.

Stated Meeting, October 27, 1885.

THE PRESIDENT, ROBERT F. WEIR, M.D.,
IN THE CHAIR.

STRicture OF THE CESOPHAGUS; INTERNAL CESOPHAGOTOMY.

DR. H. B. SANDS presented a woman, twenty-one years of age, who had come under his observation one year ago last June. She was sent by Dr. Paddock, of Dalton, Mass., on account of a stricture of the cesophagus, which was the result of the accidental swallowing of a solution of caustic potash when she was two years old. Dr. Paddock stated that he had been called to see the patient on account of dysphagia. She was unable to swallow solid food, and was badly nourished. He detected a close stricture through which he could pass only the smallest sized bougie. When she came to Dr. Sands he was able to confirm the diagnosis made by Dr. Paddock, and found a stricture situated seven inches from the incisor teeth, through which he could introduce a French catheter, No. 12. He endeavored to dilate the stricture, and succeeded in carrying the dilatation up to No. 23, French, but was unable to accomplish more. Therefore, on the ninth of July, 1884, he introduced the cesophagotome, which he had already shown to the Society, passed the bulb beyond the stricture, projected the blade one-tenth of an inch and then withdrew it, making an incision in the posterior median line of the cesophagus. Immediately after the opera-

tion, which was performed without an anæsthetic, and was attended by no hemorrhage, he passed a No. 29 French bougie; subsequently he carried the dilatation up to No. 34, French. After the cutting operation instruments were at first passed every second or third day, and during the summer and autumn at intervals of three weeks. In December the interval between the introduction of the bougies was increased to one month, after the first of January to two months, and now there has been an interval of three months without any diminution in the calibre of the œsophagus at the point where it was divided.

Soon after the operation, exploration of the œsophagus revealed the presence of another stricture ten inches from the incisor teeth, which admitted No. 24, French. Dr. Sands dilated this stricture, and carried the dilatation up to No. 29; but beyond this he had been unable to dilate it.

He then demonstrated the lower stricture, and showed that the upper stricture allowed a bougie, No. 34, to pass, while the lower one arrested instruments larger than No. 29.

The reason why he presented the patient was because he thought it desirable to correct the common impression that all strictures of the œsophagus exhibit an invincible tendency to recontraction, and that the operation of internal division is unsatisfactory because it is not likely to produce any permanently good result.

It so happened that he had received this evening a communication from the friends of a child upon whom he had performed several operations of internal œsophagotomy two years ago for the relief of a stricture of the œsophagus, and whose case he had already reported to the Society. In that instance the dilatation was carried up to No. 29. The child improved in health, is able to eat solid food, and has remained well ever since. At the present time she swallows as other children do, yet no bougie has been passed since last May.

Dr. Sands cited these facts in order to prove that internal œsophagotomy may sometimes produce results which are permanent; and although the œsophagus may not be restored to its normal dimensions, it may not show a tendency to contract below such dimensions as will permit easy deglutition.

He had been led to desist from doing more in the case exhibited this evening because the patient is in good health, has gained in weight from ninety-six to one hundred and nine pounds; is able to swallow liquids without difficulty, and with care to swallow solids when well masticated.

Stricture of the œsophagus closely resembles strictures of the urethra, in which there is found every grade of constriction, and also a vast difference in the amount of tissue which causes it. He had seen a case of stricture of the œsophagus in which the entire tube was converted into a rigid canal. Under those circumstances no operation whatever could succeed in restoring a fair amount of dilatability of the œsophagus; but he believed that in many cases strictures are limited to a very short part of the canal, and in those cases he imagined that the operation of internal œsophagotomy would be likely to be followed by the greatest relief, with a minimum amount of risk.

DR. STIMSON asked, Why refrain from further operation upon the lower stricture in the patient presented?

DR. SANDS replied, only because it seemed already large enough to allow the easy deglutition of masticated food, and also because it had not shown any tendency to contract below the calibre of No. 29. He was, moreover, inclined to refrain from cutting the lower stricture for the reason that it is related to more important parts than the upper one; therefore accident in the operation may be more serious in its results. He imagined that the calibre of the œsophagus may be restored to its normal size, but he did not feel warranted in doing more than seems absolutely necessary to render deglutition easy.

DR. W. T. BULL had had occasion to treat one case, that of a lady who entered the New York Hospital two years ago. The stricture was about ten inches from the incisor teeth, and depended, so far as they were able to determine, upon a bad sore throat, possibly diphtheria. The patient could swallow only with great difficulty anything except water. The stricture admitted only No. 8, possibly No. 10, French. By persistent gradual dilatation the stricture was stretched until at the end of four months it admitted No. 32 or No. 34, French. Dr. Bull saw the patient up to one year afterwards. The bougie was passed at short intervals during four months, and at intervals of one month during the remainder of the year, at the end of which time the condition of the œsophagus was perfectly satisfactory, as she could eat anything which she chose.

CONGENITAL ANGIOMA.

DR. McBURNEY presented a man who had a congenital angioma of unusual size upon the right side. The tumor was five inches in breadth, four in depth, and extended from the median line in front to within three inches of the median line behind. The patient stated, that during early youth and until within the last seven or eight years the tumor had bled regularly, and that he had lost large quantities of blood, sometimes as much as a quart at a time. During the last seven or eight years he has been very comfortable with firm compression of the growth, and has had no hemorrhages. Dr. McBurney felt inclined to advise him to continue with this treatment, and not to have any operation whatever performed. The tumor was not pulsating at any part, was venous, and was of the cutaneous and subcutaneous variety, chiefly the latter.

EPITHELIOMA OF THE TONGUE; REMOVED BY KOCHER'S METHOD.

DR. L. A. STIMSON presented a specimen of epithelioma of the tongue, for which he had removed almost the entire organ by Kocher's lateral supra-hyoïd method. The patient was a man 68 years old; the disease extended as far back as the finger could reach through the mouth, and involved the floor of the mouth and the gum on the right side from the median line two inches backward. On the dorsum of the tongue was a very large irregular ulcer. Tracheotomy was done and the etherization was continued through the tube. The incision was made on the right side, and the right lingual and facial arteries tied in the wound before division; the left lingual was tied through the wound after divi-

sion, and this is the only ligature that was made necessary by the removal of the tongue. The entire organ, except a strip of mucous membrane at its base, was removed, as was also a portion of the submental muscles which had become involved in the disease. The area of raw surface created by the removal, was diminished by drawing the adjoining mucous membrane over it so far as possible and stitching it fast. The wound was packed with iodoform gauze, the mouth frequently cleaned by washing with a solution of salicylic acid and borax, and the patient has been regularly fed through an oesophageal tube. The tracheotomy tube was removed on the sixth day. The patient is now (16th day) doing well.

DR. SANDS had within the last ten days had occasion to remove the lateral half of the tongue on account of a cancerous swelling situated on the left side of the organ, extending toward the root but not to the median line. He adopted the method known as Whitehead's method. He etherized the patient, introduced Wood's mouth gag, passed a stout ligature through the tongue upon the right side, drew it forward, divided with a pair of straight scissors the attachment to the lower jaw and to the floor of the mouth, split the tongue in the median line toward the root, then made a transverse cut, dividing the tongue and the anterior pillar of the soft palate, and completed the operation with loss of only about eight ounces of blood. He had but little difficulty in applying a ligature to the lingual artery. He packed the wound with gauze, and used a small stomach tube for feeding the patient; during the first week the progress of the case had been entirely satisfactory, and the man is now able to swallow, and is convalescent. Dr. Sands was very much impressed with the excellence of the method in those cases in which the disease is strictly limited to the tongue. He was sure that the operation could be safely done if the entire organ required to be removed, and he should prefer to perform this operation rather than that which included a preliminary ligation of one or both lingual arteries.

DR. BRIDDON asked whether the difficulty in securing the arteries would not be greater in Whitehead's operation.

DR. SANDS replied that the operation did not consist in cutting off the tongue at once, but by making short strokes, and tying the arteries as they are divided. Of course, the cases should be selected in which the operation is especially applicable.

THE PRESIDENT remarked, with regard to Kocher's operation for removal of the tongue well back, that it had pleased him most on account of the thoroughness with which all diseased tissue can be removed.

NECROSIS OF THE HUMERUS WITHOUT THE FORMATION OF INVOLUCRUM.

DR. A. C. POST presented a specimen of necrosis of the humerus without any attempt at the formation of involucrum. It was removed from the arm of a boy 12 years of age, with the history that, between one and two years ago, he was bitten by a spider, and that the bite was followed by very severe inflammation. A number of months afterward extensive suppuration occurred about the joint, and Dr. Post performed excision of the elbow. Subsequently he found the wound at the joint had healed, but that there was suppuration higher up

and loss of continuity in the bone of the arm nearly as high as the middle of the humerus. Recently he cut down upon the bone and found that its lower extremity was necrosed to the extent of 2 $\frac{1}{2}$ inches on one side and 1 $\frac{1}{2}$ inches on the other. The dead bone was lying loose in the midst of granulations. The inferior extremity of the living bone above presented a jagged extremity, but was not bone to any considerable extent. He did not remember any other instance in which necrosis of a long bone of an extremity had occurred without the formation of involucrum, except in a case of necrosis of the fibula; also in a boy, in which the tibia was not involved. In that case the fibula for its whole length, except the two articular extremities, was in a state of necrosis, and there was no involucrum. The tibia formed a support for the limb, so that there was no false point of motion.

DR. L. A. STIMSON thought that something besides simple necrosis had occurred in the bone presented, and it was filled with bony deposit, and that the shell had disappeared by absorption.

DR. POST remarked that the whole process is different from the ordinary process of necrosis, but the bone was evidently dead.

MONTREAL MEDICO-CHIRURGICAL SOCIETY.

Stated Meeting, November 6, 1885.

THE PRESIDENT, THOMAS G. RODDICK, M.D.,
IN THE CHAIR.

TUMORS OF THE OVARY.

DR. WM. GARDNER presented two ovarian tumors which he had removed from the same individual; the right one had been removed by enucleation of the cyst, and the left by ligature of a very broad pedicle. Troublesome hemorrhage occurred, which was with difficulty arrested by ligature and the thermo-cautery. The patient did well.

DR. TRENHOLME also presented a large ovarian tumor which he had that day removed, and which, on the right side, contained a large solid mass, which he looked upon as malignant.

FATAL PULMONARY EMBOLISM ARISING FROM SIMPLE FEMORAL THROMBOSIS.

DR. GEORGE ROSS exhibited the heart and lungs of a patient, under his care, who had died suddenly in the General Hospital. The pulmonary artery, on being laid open, showed its left branch plugged by a thick fibrinous clot, beginning an inch above the valves, the lower end lying loose in the main artery, and for some distance curled back upon itself. Still nearer the heart, and almost touching the valves, lay a second loose clot, about three-quarters of an inch long, having the same appearance as the first. The clotting extended far into the lung, and even some of the small bronchial branches were plugged. The right pulmonary artery and its divisions were quite similarly occupied by an extensive fibrinous deposit. The femoral vein was also shown, containing a clot several inches in length, and extending a long way down the internal saphenous vein.

The patient was a young woman who had presented the usual symptoms of a simple anæmia for some months, when she developed pain and swelling of the

right leg. She was then admitted to the Montreal General Hospital, under Dr. Ross, when the existence of a femoral thrombosis was readily detected by the presence of a firm cord in the situation of the vessels. Her general condition was good, with the exception of a moderate degree of anaemia. One week after admission, after having passed a good night, she complained early in the morning of suddenly feeling faint; this soon passed off, and nothing more was thought of it. At 12.45 P.M. she became suddenly breathless and much distressed. Stimulants were administered, but in fifteen minutes she was dead. The occurrence of pulmonary embolism was immediately suspected, and at the post-mortem the condition already described was found.

Dr. Ross remarked that, although very frequently meeting with femoral thrombosis, it was the first time he had ever observed this fatal accident following from it. It had been his misfortune a short time since to meet with a sudden death ten days after a natural confinement, and a perfectly natural puerperium. An autopsy in this case likewise showed the fatal result to have occurred from pulmonary embolism, as had been suggested. The present case was of interest from the syncopal attack in the early morning, which no doubt was produced by surprise of the heart at the arrival of a foreign body. Dr. Ross said he had been very much struck in both these cases by the great extent of the clotting through the branches of the pulmonary artery, which must have taken time to form, although no pulmonary symptoms prevailed during that period.

EXCISION OF THE SPLEEN.

THE PRESIDENT (Dr. Roddick) exhibited portions of a spleen which he had removed a few days ago from a man in the General Hospital. The man had been struck by a loaded bucket of coal whilst in the hold of a vessel. The bucket, containing about half a ton of coal, had fallen from a height and crushed him against the side of the ship. When brought to hospital he was suffering severely from shock, greatly blanched and almost pulseless. There was a small wound in the left lumbar region between the last rib and crest of the ilium, which was bleeding freely. There was also fracture of several of the lower ribs on left side. Dr. Roddick enlarged the wound and found that he came immediately on the intestines, the intervening muscular structures being all torn away, leaving nothing but skin covering the intestines. Through this wound he removed a mass of tissue, which, on examination, proved to be a portion of spleen; the wound was enlarged still further, and the hemorrhage was found to come from a ruptured spleen. The vessels entering the hilus were ligatured, and the spleen was without difficulty taken away.

The man only survived the operation about six hours. At the post-mortem the lower six ribs on left side were found fractured, the left kidney lacerated in several places, and the bladder full of blood. There were only a few ounces of blood in the abdominal cavity.

GUNSHOT WOUNDS OF THE TESTICLE.

DR. JAMES BELL read a paper on gunshot wounds of the testicle, and reported two cases which he had seen in the late Northwest rebellion.

The first case was that a young soldier, aged twenty-

eight, who, whilst skirmishing before Batoche, was struck by a rifle-bullet on the outer side of thigh immediately below and behind the great trochanter. On being brought to the field hospital it was discovered that the bullet had passed through the thigh, then entered the perineum at the root of the scrotum, and made its exit through the scrotum, carrying away a portion of the testicle. The portion of testicle that remained was extruded from the lacerated scrotum. After removing several pieces of cloth in the track of the bullet, the parts were cleansed with weak carbolic lotion, the injured testicle was returned to its proper place, and the scrotal wound closed with catgut sutures. There was no hemorrhage or other troublesome symptom, and the wounds were dressed with iodoform and carbolized gauze. The patient was now sent by steamer to the base hospital at Saskatoon. On his arrival (some days after the injury) he was found to be suffering from urinary infiltration, due no doubt to sloughing of the tissues and the perineum, injured by the bullet. Extensive sloughing occurred, and his life hung in the balance for days, but the scrotal wound never reopened, although most of the left side of the scrotum sloughed away. When last seen, July 1st, his wounds had all healed; the right testicle was about half its original size, firm, free from pain and tenderness, and freely movable in the scrotum. It had apparently quite recovered from the severe wound received two months previously.

The second case was that of a half-breed, æt. 32, who was found on the battlefield of Batoche, on the night of the 12th of May, severely wounded. He was brought to the field hospital for treatment, and was found to be suffering from a contused and lacerated wound, about two inches in diameter, on the back and outer part of left thigh just below the great trochanter. The adductor longus muscle was torn and partially separated at its origin. The left testicle and the whole lower two-thirds of the scrotum were carried away. The right testicle hung down uncovered, and its lower half was filled with fragments of metal. The wounds were probably caused by the bursting of a shell. The wounds were washed and dressed, and the pieces of metal removed from the testicle. In a few days the lower half of the right testicle sloughed off, leaving an irregular granulating surface. The other wounds did well, and after a few days Dr. Bell dissected back the remaining portion of the scrotum, pared the edges, and brought them together over the testicle. The result was very satisfactory, for in a few weeks the scrotum was completely healed, and the remaining portion of the right testicle could be felt firm and painless within it.

Dr. Bell went on to say that the success attending the expectant treatment in these two cases inclined him to the belief that hardly any laceration of the testicle could be so severe as to warrant castration, although from what he had been able to gather from the literature of the subject within his reach, immediate removal of the organ was recommended in severe injuries. All authors say that the injured testicle usually atrophies, and is sometimes the seat of neuralgic pain, so that as far as future usefulness went it might as well be removed at once.

The patients, however, are always pleased to have as much saved as possible. In the statistics in the surgical volume of *The History of the American Rebellion* the

expectant treatment seems to have given better results than active operative interference; 586 cases are reported. The testicle was extirpated in 61 of these; 18 per cent. died. Of the remainder, treated by the expectant treatment, 11.9 per cent. died.

SEPARATION OF THE FIRST AND SECOND PIECES OF THE STERNUM.

DR. BLACKADER reported a case of a young man, aged eighteen, who, whilst exercising on the parallel bars in a gymnasium, felt something give away. On examination it was found that the first piece of the sternum was riding on the second; it was reduced without much difficulty, and kept in place with compresses and straps.

FRACTURE OF THE CLAVICLE WITH WOUND OF THE LUNG.

DR. F. W. CAMPBELL reported a case of fracture of the clavicle, in a coachman, aged thirty, caused by falling off his carriage and striking his shoulder on the wheel as he fell. The outer fragment was driven backward, and the lung was evidently wounded, as there was a large amount of air in the cellular tissue. The man when first seen was in a collapsed condition, and the whole neck was emphysematous. At first he was in doubt as to whether or not there was a fracture of the first rib, so he was sent to the General Hospital.

DR. RODDICK remarked that wound of the lung is a rare complication of fracture of the clavicle, and that there are very few cases on record. The man had been under his care in the hospital, and it was with difficulty that he could get the outer fragment into position. But the man is now doing well, and the bones are in good position.

PATHOLOGICAL SOCIETY OF PHILADELPHIA.

Stated Meeting, November 12, 1885.

THE PRESIDENT, J. C. WILSON, M.D., IN THE CHAIR.

DR. FORMAD presented specimens and read a paper entitled

AN ANALYSIS OF TWO HUNDRED AND FIFTY AUTOPSISES ON DRUNKARDS, ILLUSTRATING THE MOST PROMINENT ANATOMICAL LESIONS OF CHRONIC ALCOHOLISM.

He considered the most conspicuous lesions to be cyanotic induration of the kidneys, fatty infiltration of the liver, and mammillated stomach. His cases had been those, in which there was a history of a long-continued series of debauches, the subjects often dying in one of these debauches, and did not include moderate drinkers, or those who perished after imbibition of an enormous quantity of alcohol without any previous chronic excesses. He thought that the exposure, irregularities of diet, etc., incident to a state of drunkenness, had much—probably more than the alcohol itself—to do with the production of the lesions, but it is not at all possible to separate one from the other. He gave a long list of lesions considered by various authors to be results of chronic alcoholism, among which the cirrhotic liver with contraction held a prominent place. He had himself, at one time, considered cirrhosis a very frequent, if not almost necessary concomitant of long-continued excessive use of alcohol, and had even testified in court, that a certain person was not likely to have

been a hard drinker, because at the autopsy no cirrhosis of the liver was found. He had thought, too, that the connection between the two is so close that it is impossible to have a case of cirrhosis, without a previous history of alcoholism, as is held by various authors. Therefore, it was surprising to him to meet in his two hundred and fifty autopsies, with only six cases of cirrhosis of the liver with contraction. In two hundred and twenty cases the liver was considerably, or even very much enlarged, the enlargement in most cases proving to be due to a fatty infiltration. Cyanotic induration of the kidney and chronic gastritis, with mammillation of the stomach, were found in nearly every case. This cyanotic induration is peculiar, and differs from the cyanotic induration due to heart disease. At a future meeting he will give a detailed account of the above lesions, and a more extensive analysis of the cases.

DR. TYSON could not speak from a systematic observation of a large number of autopsies in the cases of confirmed drinkers, but he remembered distinctly being surprised in several cases by the absence of cirrhosis, where he confidently expected to find it.

DR. WILSON said that Anstie in the article on Alcoholism in Reynolds's *System of Medicine*, had called attention to the comparative infrequency of contracted liver in confirmed drinkers. This observer, in an extensive outpatient practice in London, had seen large numbers of cases of alcoholism, but very few among them presented the physical signs of cirrhotic (contracted) liver. The experience of the staff at Blockley Hospital sustains this view. There, many of the patients are soaked with alcohol, but even among those whose death is directly or indirectly due to alcoholic excess, fatty liver is much more common than contracted liver.

DR. OSLER thought the experience of pathologists and morbid anatomists, with histories of patients, is not of the most satisfactory character, he often having had cases to dissect where he knew very little of the history. Before saying these cases were chronic alcoholics, Dr. Formad should present more specific statements about them. His own experience with livers in a large number of autopsies on cases of chronic alcoholism, had led him to divide them into four classes: 1. Those in which the condition of the liver is pretty satisfactory; some of these cases may take alcohol for many years and yet the liver pass muster; 2. Fatty cirrhotic livers; the cirrhosis may not, perhaps, be distinct to the naked eye, but plainly shown by the microscope; this is the largest class; 3. Hobnail livers; these, he would say, were much more common than in Dr. Formad's series; 4. Hypertrophic cirrhotic livers. The difference between his observations and those of Dr. Formad, might possibly be accounted for by the difference in the form of alcoholic beverage taken. He had not observed the special form of kidney described by Dr. Formad. In reply to a question, he said, in order of frequency he would place them, fatty cirrhotic, hobnail, hypertrophic cirrhotic, apparently normal.

DR. S. SOLIS COHEN said there are certain theoretical considerations which suggested themselves in this connection. The text-books teach that the lesions of alcohol are of two kinds, sclerosis and steatosis. It is known that in some organs the fibrous change precedes the fatty one. The latter is the higher grade of degen-

eration. The subjects of Dr. Formad's autopsies were confirmed whiskey soakers, in whom one would expect to find more intensity of degeneration than in those whose use of alcohol, though persistent and excessive, was not so outrageous. Another point which had not been alluded to, is the fact, that some lesions may result from a local action of the poison upon the tissues, while others may be due to its systemic action. No study of the subject can be complete in which these points are overlooked.

DR. RANDALL suggested that the point touched upon by Dr. Osler,—the character of alcoholic beverage,—might be very important. In Vienna, among beer drinkers, he had found the fatty liver much more common than the cirrhotic; while in England, where much gin is drank, and he should suppose in Scandinavian countries, where they drink strong spirits altogether, the cirrhotic liver is doubtless comparatively frequent.

DR. MUSSER had recently had to go over the records of the Pathological Society, especially in liver diseases, and had found the total experience of different observers the same as Dr. Formad's, and also in those cases cirrhosis was caused not so much by heavy drinking, as persistent drinking of spirits on an empty stomach.

DR. FORMAD presented the

SAC OF AN EXTRAUTERINE PREGNANCY.

The woman from whom this was removed had not suspected that she was pregnant. She was in perfect health until twelve hours before death, when she was suddenly seized with excruciating pain in the left groin, rapidly followed by collapse. On opening the abdomen it was found to contain at least a gallon of partly clotted blood. About the middle of the Fallopian tube was the sac with a rent in its posterior wall. This sac was one inch in diameter and contained clotted blood and placental tissue. The uterus was twice its normal size. The fetus was not found.

NEW YORK STATE MEDICAL ASSOCIATION.

Second Annual Meeting, held in the hall of the Murray Hill Hotel, New York, Nov. 17, 18, 19, and 20, 1885.

TUESDAY, NOVEMBER 17TH.—FIRST DAY.

MORNING SESSION.

THE Association was called to order at 9:30, A.M., by the President, DR. JOHN P. GRAY, of Utica.

The committee of arrangements reported that there were forty-nine scientific contributions, four addresses, and several contributions to the study of pneumonia, to be presented before the Society. The number of papers presented last year was fifty.

In the report of the council, it was recommended that papers, which are to appear in the volume of transactions of the Association, be not previously published in the medical journals.

THE TREASURER'S REPORT

showed the total receipts for the year to be \$2461; balance in treasury from last year, \$683. Deducting disbursements for the year, there remained a balance of \$193. For the library fund, the surplus from anniversary subscriptions last year was \$630, \$315 of which was placed to the account of the building fund. Excluding

disbursements, there remained in the library fund \$31. \$80 had been subscribed for a binding fund.

DR. L. D. FERGUSON, of Troy, offered some

AMENDMENTS TO THE BY-LAWS,

to be acted upon at the next annual meeting. They referred chiefly to the abolition of the office of corresponding and statistical secretary, the appointment of a librarian by the council, and striking out certain words as to the qualifications of those becoming members.

THE PRESIDENT, DR. JOHN P. GRAY, then read his address, taking for his subject

THE RELATIONS OF THE STATE TO MEDICAL SCIENCE.

He reviewed the educational policy of the State of New York, which is confined principally to supervision of the common schools and of the normal schools in which teachers for the common schools are trained. The duties of the board of regents were briefly referred to. Law schools, medical schools, scientific schools, etc., are corporations sustained by private contributions or earnings, and are individual enterprises, receiving no grants from the State. He then asked the question, What is proper legislative interference with this class of institutions, which represent scientific education and research? That the State itself should undertake such education as a public measure and for public policy, constitutes a serious question in political economy, and for this State, for the present at least, that question has been answered adversely. Legislative control over the medical schools of this State is not demanded by public interest. It was not intended to dispute the power of the Legislature to regulate medical education and declare what shall constitute a doctor in medicine; but the fact was that the Legislature exercised its power only in the way of fostering, protecting, and advancing the interests of medical science up to giving the best opportunities to schools for attaining this end, and at the same time, as far as possible, allowing the individual entire freedom of special study and of the means for acquiring knowledge of medical science. The State had not, and could not, adopt any particular school or system of medicine as opposed to others. It is the part of wisdom to give the widest latitude to discussions wherever matters of opinion seem to be in conflict. The giving to the physician certain powers which the State had conferred upon him is the highest endorsement which the State can give the profession. The State has left the culture and development of medical science to the medical profession alone, and has granted the right to incorporate societies and associations in order to maintain its unity of work and for its elevation and progress.

With regard to the services of the medical profession to the public, little need be said. The physician's services are sought by the people in the same way that the services of the lawyer or other members of the community are sought.

The author then came to the matter of granting diplomas, and the control of this power by the State. His views were adverse to any such proposed change. The State did even attempt to regulate the compounding and sale of drugs and nostrums. As the State had nothing to do with the teaching in the schools, so it should have nothing to do with the examinations.

What possible efficiency such a proposed Board of Examiners could have in benefiting medical science, the profession, and the people, did not appear. Such a change would transfer students who come to the medical colleges of New York from all over the country, and from foreign countries, to the schools of Boston, Philadelphia, etc. The schools have done excellent work in elevating the standard of medical study, and while there is room for further improvement, to seek it in the guardianship of the State is an error. It is true also that preliminary education should be better, and this demand also promises to be met as soon as the advance of the times will permit.

THE REPORTS OF THE DIFFERENT BRANCHES

of the State Association were then read, from which it appeared that a large number of papers on different subjects connected with medical science had been read, and other work had been performed. The President of the New York County Medical Association, Dr. C. A. Leale, also read the report of the annual labors of that Society.

ADDRESS IN STATE MEDICINE.

DR. ALFRED L. CARROLL, President of the Section in State Medicine, then read his address.

He reviewed briefly State medicine, or sanitary medicine as it existed in ancient times, and said that many excellent rules were in force among the Israelites which would be of practical utility in sanitary matters if adopted at present. State medicine, in its comprehensive sense, includes all the medical interests of the State. But after popular estimation, the term has a narrow significance; it is applied more especially to practical administration of sanitary science to the protection of public health. Even with this limited definition, preventive medicine has presented its claims with greater vigor than other specialties. Modern sanitation may be defined as applied physiology. The sanitarian should be primarily an accomplished physician. But he should superadd to his medical knowledge some theoretical, if not practical, knowledge of architecture and engineering. He should know how to detect defects therein, and be competent to suggest remedies to be carried out by the artisan.

Dr. Carroll then pointed out some of the conflicting opinions of sanitary men regarding what constitutes sanitary conditions. The superstructure of public sanitation has to be built upon the laws of personal hygiene. It follows that enlightenment in this direction must originate with physicians. As was the seed sown by medical schools, so would be the harvest of public health. How have these schools fulfilled this condition? The author said he would grant that many of them furnish the opportunities for a pupil having the means and ambition to make use of them to gain the necessary education; but what is needed is an enforced education in all important branches, not leaving their study optional with the student. The author named the studies and time required for study in force in England, and said that, while the work seems formidable, it will also be seen that the knowledge to be acquired is not more than every physician should have when he comes to discharge his duties to the public and to private patients. In his official relations, Dr. Carroll

had had the opportunity to learn what are the acquirements of persons who seek positions on boards of health, and the answers by men graduated from regular medical schools were often absurdly erroneous. Now and then there were marked exceptions, even in remote country districts.

He thought a weakness in the State and local boards of New York existed in the short term of office, and in the time spent in inducting new men into strange duties. The need for a preliminary education and a higher and more thoroughly enforced medical education was pointed out.

NEWS ITEMS.

WASHINGTON.

(From our Special Correspondent.)

CHOLERA IN ITALY.—The U. S. Consul at Palermo, Italy, informed the Department of State, in a dispatch dated September 23, 1885, that the new cases and deaths from cholera had diminished since the 19th of September, the cases and deaths on that day being 258 and 185 respectively. The new cases and deaths on the 22d were 190 and 66 respectively. Up to the 23d, there had been 1279 cases, and 780 deaths.

Adverting to previous correspondence on the subject, he says, that it may be proper to say now, that the authorities, at his request, furnish him each morning with a statement of the cases and deaths of the preceding day, and that he is keeping a daily record of the thermometer and barometer, as well as of other matters which he deems of importance in connection with the epidemic, and which will be submitted in a general report upon the termination of the epidemic.

Under date of October 12, he further says, that since his last dispatch there have been 2658 new cases of cholera, and 1313 more deaths therefrom, in Palermo, making the total number of cases and deaths thus far 3937 and 2093, respectively.

The new cases and deaths of the previous day, as officially reported to him, were 110 and 51, respectively. In this connection it may be proper to state, he says, that the disease appears to have been decreasing for some time, and that if the cool and rainy weather which has obtained for some days should continue, it will disappear for the present. It is estimated that from sixty to seventy thousand people left the city since the beginning of the epidemic.

As an example of the difficulties experienced by persons leaving the city, he says that it may be of interest to state that Mr. Ignacio Florio, upon the appearance of the scourge, proceeded to his wine establishment in Marsala, as a precaution. He reached the place with great difficulty, narrowly escaping death at the hands of the infuriated country people en route. Upon reaching the outskirts of Marsala, he was met by the authorities and informed that he could not enter. It was, however, finally agreed that he should be allowed to enter his own grounds and kept therein, under guard, for a period of fifteen days. The Consul says, that as to wealth and position, Mr. Florio holds about the same relation to Palermo that Mr. W. W. Corcoran, one of our wealthiest and most prominent citizens, does to the people of Washington.

The United States Consul at Algiers, Africa, transmits, under date of October, 1885, a copy of a decree received from the Governor-General of Algeria, dated October 12, 1885, concerning the cessation of quarantine impositions and observances, and medical visits aboard all vessels coming from any French ports in the Mediterranean. He reports the health of Algiers and the districts as excellent, no cases of cholera or contagious disease of any kind having been reported during the summer.

The following is a verbatim translation of the decree:

"Government-General of Algiers, Decree.

Art. I.—"All ships coming from French ports of the Mediterranean, and arriving in Algeria with a clean bill of health, will be immediately admitted to the port without being submitted to the medical visit."

Art. II.—"The prefects of the three provinces and the maritime sanitary service, are charged with the execution of this present decree."

INSPECTION ON THE CANADIAN FRONTIER.—Surgeon Henry W. Austin, of the United States Marine-Hospital Service, who is now in charge of the inspection service now in operation on the Canadian frontier of the United States, for the prevention of the introduction of smallpox into this country, has made the following report to the Supervising Surgeon-General, dated Burlington, Vermont, November 10.

I have the honor to report that I completed the inspection of all Vermont Stations November 6th, and then returned to Burlington. Considerable complaint was heard that only a part of the Montreal baggage was disinfected at our station, and that it must be done at the points of destination. To satisfy local and State health officers, and in order that every possible precaution might be taken, I issued an order to all Vermont inspectors, and all inspectors on duty at Rouse's Point, thoroughly to disinfect all Montreal baggage, and this is now being carried out. Each station has a well-equipped fumigation building, where the baggage is opened and hung up on hooks, and allowed to remain in sulphurous acid gas for from four to twelve hours, according to the nature of the articles to be disinfected. Three pounds of sulphur are burned in one thousand cubic feet of space. The baggage is then carefully put back into the trunks, which are then checked and sent to their destination. Very few certificates of vaccination are at present accepted by our inspectors, but the arm is examined instead, and all are vaccinated when considered necessary. Large quantities of freight, consisting of household goods, are disinfected at each station. This is generally done in a freight car which is suitable for the purpose.

To illustrate the faithfulness and thoroughness with which the work is done aboard the trains, and the various means resorted to by certain emigrants, I will cite a few incidents. At Ogdensburg, New York, an Indian of some Canadian tribe, was met on the ferry by our inspector, and he was asked the question whether he had been vaccinated. He replied, "Indian had not been vaccinated, and not propose to be." He was informed that he would have to return unless he allowed the inspector to vaccinate him. He reluctantly consented, and when the vessel arrived at port it was found that he had baggage that required disinfection. To this

he strongly objected, but rather than have it returned, gave it over to the inspector, who put it in the fumigation building. He waited and watched the process with great interest, and as soon as the door was opened plunged into the room where the smoke was so dense that nothing could be seen, but returned in a second (well fumigated), but nearly suffocated. He finally received his baggage and started. He immediately got drunk and was put in the lock-up by the city authorities, and was returned to Canada the next morning, he being without means of support.

On one of the trains a woman slipped by the inspector and entered the water closet. She was allowed to remain there two hours, and then a brakeman rapped for her to come out. She refused to do so, and had to be taken out by force. She was vaccinated, and allowed to pass. Passengers will mutilate their own arms, and produce the wound as evidence of vaccination. They have been detected in doing this, but it does not often succeed. They frequently wipe off the virus after they have been vaccinated, and always, when they are discovered, must submit to revaccination. On certain railroads, twenty per cent. of all passengers are vaccinated.

The fumigation of baggage is performed by the baggage-masters of the different roads, as they requested that they be permitted to do the work, as they were responsible for the baggage, and would be obliged to oversee the work and look after checks and shipping. This, of course, is done under the direction of the sanitary inspectors, but we are obliged to pay the men for this work, and they are subject to our orders. In this connection I would like to inform you that the railroad authorities of the Central Vermont, the Grand Trunk, the South Eastern, and the Passumpsic, have given us every facility to inspect passengers, baggage, and freight, and have assisted and supported our inspectors by every means in their power, and deserve the thanks of the Service and the community generally.

The inspection of trains is a difficult work, but it is being done as thoroughly as it is possible to do it. The inspectors are doing their work well, as I believe the result will prove. I have been with each inspector in making his trip to Canada and return, and am satisfied that all understand their duties, and are doing them well, and satisfactorily to all intelligent and unprejudiced persons.

PROFESSOR VIRCHOW ON THE CONGRESS DISSENSIONS AND THE AMERICAN MEDICAL ASSOCIATION.—At the recent celebration of the Berlin Medical Society, of the 25th anniversary of its organization, the President, Professor Virchow, in the course of his address took occasion to speak of the aims and scope of the Society, and in this connection referred to those of the American Medical Association, and its relation to the present deplorable condition of the International Congress organization.

He said: I have always held the opinion, and as early as the reform movements of 1848 gave expression to it, that if physicians wished to occupy an influential position, an association, of all things, was most necessary, in which they could, alone, find protection, and which could be made effectual by the energetic coöperation of its members. It has been recently attempted to extend

still further this effort at organization, so as to include all Germany, and thus to increase the influence of the profession. But I do not see now that anything is to be accomplished in this way. I think much more will be accomplished if the societies are maintained which naturally exist, and which local conditions demand, provided these are sufficiently strong each to say, we are the representatives of the entire body of physicians of our locality. The larger we grow, the more influential will this Society become, so that, at least for Berlin, it will prove that it is representative. We do not desire to be recognized as the representatives of all Germany, we do not wish to go beyond our own locality, but we desire to set an example and to furnish strong testimony of that which we represent in our own proceedings.

Of what may result when these aims are lost sight of, we have at this moment a mournful example in America. You know your delegates to the International Medical Congress held last year at Copenhagen, were instructed to invite the Congress to hold its next session at Berlin. We were outvoted, I am sorry to say, by the coöperation of our German colleagues. The Congress decided to go to America. What is the result? A situation which at this moment makes it extremely dubious whether an International Congress in America is possible. While the individual societies of that country, to some extent like ours, consider science their shield and their defence, and have endeavored to create an organization in which the eminent representatives of American medicine shall also appear as the representatives of the coming Congress—the American Medical Association, a vast society of practising physicians, extending throughout the land, usurps the control of the organization of the next session of the Congress, and creates such confusion that, I am informed, verbally and by letter, that no one at present is able to see his way out of the difficulty. Now, how did this dilemma originate? In the fact that the American Medical Association has set up a Code of Ethics, so called, and that with this code of professional ethics the admission to the Association is so broadly extended that entrance is free to all manner of dubious individuals. Hence has it resulted that, instead of eminence, mediocrity has come to the front, and that this Association, where the code is concerned, concerns itself more with forms than with principles.

May I not then well say that we are proud of our organization, by virtue of the care which we exercise in electing new members, and that we have, in this way especially, guarded against the necessity of forming a code of ethics, which every upright physician should in fact carry in his own bosom, and if he transgresses it, he should be restrained both by the example and admonition of his colleagues? This has been our conviction, thus have we regarded the Association, so do we regard the great associations of physicians. With us, no necessity has been found to establish special codes, or protective measures to secure us against the actions of dishonorable associates. Our unwritten code of ethics, without extreme measures, has become firm, and it behoves us to make it firmer and firmer, and from this it will result that we will be independent of the State and Government, and go through life as free men, and representatives, not only of a "craft," as the

law designates us, but of a free art to which we have elevated our craft.

THE LACKAWANNA COUNTY (PA.) MEDICAL SOCIETY AND THE CONGRESS ORGANIZATION.—At the stated monthly meeting of the Lackawanna County Medical Society, held on November 10th, attention was called to a circular, which had been widely distributed through the State, soliciting support for the action of the New Orleans meeting of the American Medical Association regarding the organization of the Washington meeting of the International Medical Congress. Resolutions were then adopted condemnatory of this action.

THE AMERICAN PUBLIC HEALTH ASSOCIATION will hold its thirteenth annual meeting in the city of Washington, beginning on Tuesday, December 8, at Willard's Hotel Hall.

The Executive Committee have selected the following topics for consideration at said meeting:

1. *The best form in which the Results of Registration of Diseases and Deaths can be given to the Public, in Weekly, Monthly, and Annual Reports.*
2. *The Proper Organization of Health Boards and Local Sanitary Service.*
3. *Recent Sanitary Experiences in Connection with the Exclusion and Suppression of Epidemic Disease.*

Also, the *Lomb Prize Essays*.

1. *Healthy Homes and Foods for the Working-classes.*
2. *The Sanitary Conditions and Necessities of School-houses and School-life.*
3. *Disinfection and Individual Prophylaxis against Infectious Diseases.*
4. *The Preventable Causes of Disease, Injury, and Death in American Manufactories and Workshops, and the Best Means and Appliances for Preventing and Avoiding Them.*

In addition to other able and comprehensive papers expected to be presented at this meeting, the Secretary has received notice of the following from the able and well-known writers named below:

Forms of Tables for Vital Statistics. By Dr. J. S. Billings, LL.D., U. S. A., Washington, D. C.

Sanitary and Statistical Nomenclature. By Dr. E. M. Hunt, Secretary State Board of Health, Trenton, N. J.

Statistics of Consumption in Rhode Island for a Quarter of a Century. By Dr. Charles H. Fisher, Secretary State Board of Health, Providence, R. I.

The German System of Physical Training. By Dr. E. M. Hartwell, Johns Hopkins University, Baltimore, Md.

School Hygiene, Public and Private. By Dr. William Oscar Thrailkill, of San Francisco, Cal.

Sanitary Protection of New Orleans, Municipal and Maritime. By Dr. Joseph Holt, President State Board of Health, New Orleans, La.

Maritime Sanitation. By Dr. S. T. Armstrong, U. S. M. H. S., Memphis, Tenn.

Smallpox in Canada, and the Methods of Dealing with it in the Different Provinces. By Dr. P. H. Bryce, Secretary Provincial Board of Health, Toronto, Ont.

The Debit and Credit Account of the Plymouth Epi-

demic. By Dr. Benj. Lee, Secretary State Board of Health, Philadelphia, Pa.

An Epidemic of Typhoid Fever. By Dr. C. A. Lindsley, Secretary State Board of Health, New Haven, Conn.

Experiences in Disinfecting Sewers. By Dr. O. W. Wight, Health Officer, Detroit, Mich.

Progress of Health Work in Kentucky. By Dr. J. N. McCormick, Secretary State Board of Health, Bowling Green, Ky.

Observation on the Cape Fear River Water as a Source of Water-supply: A Study into the Character of Southern River Water. By Dr. Thomas F. Wood, Secretary State Board of Health, Wilmington, N. C.

The Virus of Hog Cholera. By Dr. D. E. Salmon, D.V.S., of Wilmington, D. C.

Hygiene of the Dwelling. By George N. Bell, C.E., of Newport, R. I.

The Proper Disposal of the Dead. By Dr. John Morris, of Baltimore, Md.

The Relations between Microorganisms and Cells. By Dr. A. C. Bernays, St. Louis, Mo.

The Layman in Sanitation. By Dr. W. H. Watkins, of New Orleans, La.

Who is Responsible for the Iniquities of the Third and Fourth Generations, and How Shall They be Avoided? By Dr. R. Harvey Reed, Secretary State Sanitary Association, Mansfield, Ohio.

Carelessness the Cause of Disease. By Dr. W. John Harris, of St. Louis, Mo.

The Committee on Disinfectants will present quite a voluminous report (printed), embodying their investigations and conclusions on the subject of disinfection and disinfectants. This report will be one of great public interest, and will probably call forth much interesting discussion.

The headquarters of the Officers and Committees will be at Willard's Hotel.

Applications for certificates to enable members and those intending to become members, and their families, to obtain the reduced rates offered by the various railroad lines to Washington, should be made without delay, to the Committee of Arrangements, J. C. McGinn, Secretary, Washington, D. C.

The Committee of Arrangements will issue a circular, giving full information regarding reduced railroad fare, hotel rates, etc., in ample season before the meeting.

Reports received from various quarters indicate that the forthcoming meeting will be largely attended, and one of national interest and importance. The subject of the restriction and management of epidemics at the present time is of sufficient importance alone to bring together a large and able body of sanitarians.

PROPOSED PERIODICAL CONGRESS OF RUSSIAN SURGEONS.—Professor Skilasovski, of Moscow, writes to the *Vratch*, urging the importance of regular meetings of Russian surgeons every two or three years, to be held alternately in St. Petersburg and Moscow, for the purpose of keeping the knowledge of provincial surgeons up to date.—*The British Medical Journal*, October 17, 1885.

THE WILLIAM F. JENKS'S PRIZE.—The widow of Dr. William F. Jenks has presented, as a memorial of her

husband, to the College of Physicians of Philadelphia, in trust, five thousand dollars, the interest of which is to be triennially awarded for the best essay offered in competition upon some subject connected with obstetrics and gynecology. The prize is to be known as the William F. Jenks's Prize.

THE PUBLICATIONS OF THE GERMAN IMPERIAL BOARD OF HEALTH.—The publications of the Imperial Board of Health of Germany now take place on a new system. Every week there is issued a journal containing sanitary information and news, whilst from time to time there are to be published in supplementary quartos the scientific memoirs which represent the laboratory work of the institution. Hitherto these have appeared in completed volumes at intervals of about two years. There has already appeared the first instalment of the new issue, "Arbeiten aus dem Kaiserlichen Gesundheitsamte," Erster Band, Erstes und Zweites Heft. Preis 6m. It contains (1) a report upon the Condition of the Berlin Water-supply, edited by Dr. G. Wolffhügel; (2) Methods of Milk Analysis; (3 and 4) Experimental Researches, etc., on Swine Fever and Preventive Inoculation, by Drs. Leeffler and Schütz; and (5) the Vaccination Statistics for Germany for 1882.

THE LATE DR. THUILLIER.—The remains of the late Dr. Thuillier, member of the French Cholera Mission to Egypt, where he fell a victim to that disease in 1883, arrived at Marseilles on the 7th of September, and were immediately forwarded to Amiens, his native town, where they were interred at the expense of the State on the 14th instant. The funeral ceremony took place in the presence of the Minister of Public Instruction, the Prefect of the Somme, the Mayor of Amiens, and of M. Pasteur, who pronounced an oration over his late pupil and friend.—*The Lancet*.

PROFESSOR VIRCHOW ON ACCLIMATIZATION.—At the recent Congress of German Naturalists and Physicians held at Strasburg, Professor Virchow gave an address on acclimatization. He said that he would not discuss the political question as to the propriety of Germany forming colonies, but would point out how wide was the scope for scientific investigation into the subject, an inquiry which might influence State measures. He drew attention to the Amsterdam Congress of Colonial Medicine last year as evidence of the growing desire to learn more concerning the conditions of life and the changes experienced in the human organism under altered climatic influences. When an individual goes to a very different climate he is mostly at first uncomfortable, and after some weeks finds his organism regain its equilibrium; he has accommodated himself to new conditions; his organs have endured material change; he suffers from climatic indisposition or disease. Although the French and English have published much upon the subject, yet researches upon the special changes that precede the onset of disease are entirely wanting. On the other hand, the clinical study of tropical disease has been very much advanced. Whoever studies acclimatization must do so with a view to establish certain geographical limits of ethnological provinces analogous to botanical and zoological provinces. The Professor next proceeded to inquire how far the white races are

known to be capable of acclimatization, and showed that the Semitic are much more capable of it than the Aryan races; and amongst Aryans, the southerners (Portuguese, Spanish, Maltese, etc.) are more so than the northerners. Mixed races with strong Semitic admixture are more easily acclimatized than the pure Aryan stock. These races have developed in North America, the French in Canada, the Yankees in the United States, the English in Australia, but not in its northern, hotter parts. All these inhabit latitudes not far removed from the European, and yet they often become sterile, and the population decreases. Individuals born in the new country of the immigrant population never exceed three generations—for example, the English in India; and in spite of attempts to consolidate the Aryan colonization of the Indies by means of sanitary measures, it does not succeed. Medical officers of the navy and merchant service, and others, should study these conditions in the light of physiology. What is it that is most at fault? Is tropical anæmia a diminished formation or an increased destruction of blood? Tropical anæmia is found not only in regions where malaria, pernicious relapsing fever, dysentery, or yellow fever prevails, but it occurs apart from these diseases. This increase in blood disintegration excites a great tendency to diseases of the liver, and the liver is the main point of attack for diseases of acclimatization. To investigate the particular kind of disorders induced by acclimatization in individual organs is, Professor Virchow said, a paramount duty imposed upon German science. It does not depend upon special examples, but on the scientific determination of the conditions of existence for the vulnerable race of emigrants.—*Lancet*, Oct. 10, 1885.

OBITUARY RECORD.—DR. A. T. KEYT, one of the most prominent and esteemed physicians of Cincinnati, Ohio, died, at his home, November 9, 1885.

Dr. Keyt possessed great mechanical skill and was the inventor of a cardio-sphygmograph, with which, by the study of the heart and pulse, he obtained distinguished recognition both in this country and Europe.

NOTES AND QUERIES.

RETARDED DEVELOPMENT OF THE VACCINE PUSTULE.

To the Editor of THE MEDICAL NEWS.

SIR: I send you a case of retarded appearance of the vaccine pustule:

S. G., twenty-five years of age, was vaccinated on October 9, 1885. The matter used was animal virus. At the end of twelve days, there being no sign of the vaccination taking, she was re-vaccinated on the same arm, with the result of the first point of vaccination taking in a very marked manner, while the point of second vaccination healed up as a simple scratch.

Should you consider the above account of enough importance to publish, I shall be much pleased.

Resp. yours,
E. J. MORRIS.

PHILADELPHIA, 2203 ST. JAMES PLACE,
November 12, 1885.

BINAURAL STETHOSCOPES.

SPEAKING of an improved form of binaural stethoscope, Dr. W. A. Edwards says, in THE MEDICAL NEWS for November 7: "That binaural stethoscopes have not received from American physicians the attention that they demand is in part due, I think," etc. This sounds rather strangely, in view of the fact that the binaural stethoscope is the invention of an American physician; and was in use in the United States for a long time before it became known else-

where, and, even now, is by no means so commonly met with in Europe as it is in this country.

F. A. CASTLE.

NEW YORK, 55 EAST FIFTY-SECOND STREET.

OFFICIAL LIST OF CHANGES IN THE STATIONS AND DUTIES OF OFFICERS SERVING IN THE MEDICAL DEPARTMENT U. S. ARMY, FROM NOVEMBER 10 TO NOVEMBER 16, 1885.

BAILEY, E. L., *Colonel and Surgeon*.—Relieved from duty as Attending Surgeon, San Francisco, California, and ordered for duty as Medical Director, Division of the Pacific and Department of California.—*S. O. 260, A. G. O.*, November 11, 1885.

NORRIS, BASIL, *Lieutenant-Colonel and Surgeon*.—Ordered for duty as Medical Director, Department of the Columbia.—*S. O. 260, A. G. O.*, November 11, 1885.

MCKEE, J. C., *Major and Surgeon*.—Ordered for duty as Attending Surgeon and Examiner of Recruits, Boston, Massachusetts.—*S. O. 260, A. G. O.*, November 11, 1885.

VOLUM, E. P., *Lieutenant-Colonel and Surgeon*.—Ordered for duty as Medical Director, Department of Texas.—*S. O. 260, A. G. O.*, November 11, 1885.

SMITH, J. R., *Lieutenant-Colonel and Surgeon*.—Ordered for duty as Attending Surgeon, New York City.—*S. O. 260, A. G. O.*, November 11, 1885.

ALEXANDER, R. H., *Lieutenant-Colonel and Surgeon*.—Ordered for duty as Medical Director, Department of Arizona.—*S. O. 260, A. G. O.*, November 11, 1885.

OFFICIAL LIST OF CHANGES IN THE MEDICAL CORPS OF THE U. S. NAVY FOR THE WEEK ENDING NOVEMBER 14, 1885.

KINDELBERGER, DAVID, *Medical Director*.—Granted leave of absence to June 30, 1886, with permission to leave the United States.

WIEBER, F. W. F., *Assistant Surgeon*.—To remain on Receiving Ship "Vermont" until May 15, 1885.

SAYRE, J. S., *Assistant Surgeon*.—Detached from Naval Hospital, Mare Island, and ordered to the "Omaha."

DIXON, W. S., *Surgeon*.—Detached from the Coast Survey Steamer "Hassler" upon reporting of his relief Passed Assistant Surgeon D. O. Lewis, and wait orders.

LEWIS, D. O., *Passed Assistant Surgeon*.—Detached from Naval Rendezvous, San Francisco, and ordered to relieve W. S. Dixon, Steamer "Hassler."

DUNGAN, J. S., *Medical Director*.—Ordered to Naval Rendezvous, San Francisco, to relieve Passed Assistant Surgeon D. O. Lewis.

OFFICIAL LIST OF CHANGES OF STATIONS AND DUTIES OF MEDICAL OFFICERS OF THE UNITED STATES MARINE-HOSPITAL SERVICE, FOR THE WEEK ENDING NOVEMBER 14, 1885.

URQUHART, F. M., *Passed Assistant Surgeon*.—Upon closure of Cape Charles Quarantine Station, to proceed to Norfolk, Virginia, for duty. November 5, 1885.

BATTLE, K. P., *Assistant Surgeon*.—Resignation accepted, as tendered by the Secretary of the Treasury, to take effect November 25, 1885. November 3, 1885.

WHEELER, W. A., *Passed Assistant Surgeon*.—To proceed to Ontario, Canada, on special duty, November 11, 1885.

URQUHART, F. M., *Passed Assistant Surgeon*.—To proceed to Baltimore, Maryland, with Steamer "Manhattan," and then rejoin station, November 12, 1885.

THE MEDICAL NEWS will be pleased to receive early intelligence of local events of general medical interest, or of matters which it is desirable to bring to the notice of the profession.

Local papers containing reports or news items should be marked.

Letters, whether written for publication or private information, must be authenticated by the names and addresses of their writers—of course not necessarily for publication.

All communications relating to the editorial department of the NEWS should be addressed to No. 1004 Walnut Street, Philadelphia.